Supreme Court, U.S.
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MICHAEL RODAK, JR., CLERK

No. 80-649

IN THE
Supreme Court of the United States
OCTOBER TERM, 1980

EDISON ELECTRIC INSTITUTE, *et al.*,
Petitioners,

v.

DOUGLAS M. COSTLE, *et al.*,
Respondents.

APPENDIX TO THE PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

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October 20, 1980

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[SEAL]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Washington, D.C. 20460

March 18, 1980

Office of
General Counsel

Henry V. Nickel, Esq.
Hunton & Williams
1919 Pennsylvania Ave., N.W.
Suite 700
Washington, D.C. 20036

Dear Mr. Nickel:

Your letter of November 9, 1979 to the Administrator, styled "Request for Clarification of Interpretation" has been referred to me for response. Your letter requests that the Agency "clarify that new [40 CFR] § 58.26 and Appendix F are reporting requirements only and in no way affect the Part 50 and 53 requirements that compliance with the 24-hour [national ambient air quality] standard [for SO_2] be determined on a calendar-day basis." You have also filed a brief as *amicus curiae* in the pending case of *PPG Industries* v. *Costle*, Nos. 79-1708, etc. (D.C. Cir.), in which you urge the same position.

As you know from the brief EPA has recently filed and served on you in the *PPG* case, the Agency does not share your views. Since that brief states the Agency's views in detail, and responds to the arguments made in

your Request for Clarification of Interpretation, I respectfully refer you to the brief.

Sincerely,

/s/ Earl Salo
EARL SALO
Attorney
Air, Noise & Radiation
Division (A-133)

cc: Kenneth A. Reich, Department of Justice

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

September Term, 1979

No. 80-1441

EDISON ELECTRIC INSTITUTE, *et al.*,
Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

Filed June 17, 1980

Before: McGowan,* Mikva and Edwards; Circuit Judges.

ORDER

On consideration of respondent's motion to dismiss petition for review for lack of jurisdiction, the opposition and the corrected opposition thereto and of the reply, it is

ORDERED by the Court that respondent's motion is granted and the petition for review herein is dismissed.

Per Curiam

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* Circuit Judge McGowan did not participate in the foregoing order.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

September Term, 1979

No. 80-1441

EDISON ELECTRIC INSTITUTE, *et al.*,
Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

Filed July 22, 1980

Before: Wright, Chief Judge, McGowan, Tamm, Robinson, MacKinnon, Robb, Wilkey, Wald, Mikva, Edwards and Ginsburg, Circuit Judges.

ORDER

Petitioners' suggestion for rehearing *en banc* has been circulated to the full Court and no judge in regular active service has requested a vote thereon. On consideration of the foregoing, it is

ORDERED by the Court *en banc* that the aforesaid suggestion is denied.

Per Curiam

For the Court:

GEORGE A. FISHER,
Clerk

By: /s/ Robert A. Bonner
ROBERT A. BONNER
Chief Deputy Clerk

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sec. 109. (a) (1) The Administrator—

(A) within 30 days after the date of enactment of the Clean Air Amendments of 1970, shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each air pollutant for which air quality critera [sic] have been issued prior to such date of enactment; and

(B) after a reasonable time for interested persons to submit written comments thereon (but no later than 90 days after the initial publication of such proposed standards) shall by regulation promulgate such proposed national primary and secondary ambient air quality standards with such modifications as he deems appropriate.

(2) With respect to any air pollutant for which air quality criteria are issued after the date of enactment of the Clean Air Amendments of 1970, the Administrator shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant. The procedure provided for in paragraph (1) (B) of this subsection shall apply to the promulgation of such standards.

(b) (1) National primary ambient air quality standards, prescribed under subsection (a) shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. Such primary standards may be revised in the same manner as promulgated.

(2) Any national secondary ambient air quality standard prescribed under subsection (a) shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. Such secondary standards may be revised in the same manner as promulgated.

(c) The Administrator shall, not later than one year after the date of the enactment of the Clean Air Act Amendments of 1977, promulgate a national primary ambient air quality standard for NO_2 concentrations over a period of not more than 3 hours unless, based on the criteria issued under section 108(c), he finds that there is no significant evidence that such a standard for such a period is requisite to protect public health.

[PL 95-95, August 7, 1977]

(d) (1) Not later than December 31, 1980, and at five year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 108 and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 108 and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

(2) (A) The Administrator shall appoint an independent scientific review committee composed of seven members including at least one member of the National Academy of Sciences, one physician, and one person, representing State air pollution control agencies.

(B) Not later than January 1, 1980, and at five-year intervals thereafter, the committee referred to in subparagraph (A) shall complete a review of the criteria published under section 108 and the national primary and secondary ambient air quality standards promulgated under this section and shall recommend to the Administrator any new national ambient air quality-standards and revisions of existing criteria and standards as may be appropriate under section 108 and subsection (b) of this section.

(C) Such committee shall also (i) advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards, (ii) describe the research efforts necessary to provide the required information, (iii) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and (iv) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

[PL 95-95, August 7, 1977]

IMPLEMENTATION PLANS

Sec. 110. (a) (1) Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within nine months after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 109 for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State. In addition, such State shall adopt and submit to

the Administrator (either as a part of a plan submitted under the preceding sentence or separately) within nine months after the promulgation of a national ambient air quality secondary standard (or revision thereof), a plan which provides for implementation, maintenance, and enforcement of such secondary standard in each air quality control region (or portion thereof) within such State. Unless a separate public hearing is provided, each State shall consider its plan implementing such secondary standard at the hearing required by the first sentence of this paragraph.

(2) The Administrator shall, within four months after the date required for submission of a plan under paragraph (1), approve or disapprove such plan or any portion thereof. The Administrator shall approve such plan, or any portion thereof, if he determines that it was adopted after reasonable notice and hearing and that—

(A) except as may be provided in subparagraph (I), (i), in the case of a plan implementing a national primary ambient air quality standard, it provides for the attainment of such primary standard as expeditiously as practicable but (subject to subsection (e)) in no case later than three years from the date of approval of such plan (or any revision thereof to take account of a revised primary standard); and (ii) in the case of a plan implementing a national secondary ambient air quality standard, it specifies a reasonable time at which such secondary standard will be attained;

(B) it includes emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standard, including, but not limited to, transportation controls, air quality maintenance plans, and preconstruction review of

direct sources of air pollution as provided in subparagraph (D);

[PL 95-95, August 7, 1977]

(C) it includes provision for establishment and operation of appropriate devices, methods, systems, and procedures necessary to (i) monitor, compile, and analyze data on ambient air quality and, (ii) upon request, make such data available to the Administrator;

(D) it includes a program to provide for the enforcement of emission limitations and regulation of the modification, construction, and operation of any stationary source, including a permit program as required in parts C and D and a permit or equivalent program for any major emitting facility, within such region as necessary to assure (i) that national ambient air quality standards are achieved and maintained, and (ii) a procedure, meeting the requirements of paragraph (4), for review (prior to construction or modification) of the location of new sources to which a standard of performance will apply;

[PL 95-95, August 7, 1977]

(E) it contains adequate provisions (i) prohibiting any stationary source within the State from emitting any air pollutant in amounts which will (I) prevent attainment or maintenance by any other State of any such national primary or secondary ambient air quality standard or (II) interfere with measures required to be included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility, and (ii) insuring compliance with the requirements of section 126, relating to interstate pollution abatement;

[PL 95-95, August 7, 1977]

(F) it provides (i) necessary assurances that the State will be adequate personnel, funding, and authority to

carry out such implementation plan, (ii) requirements for installation of equipment by owners or operators of stationary sources to monitor emissions from such sources, (iii) for periodic reports on the nature and amounts of such emissions; (iv) that such reports shall be correlated by the State agency with any emission limitations or standards established pursuant to this act, which reports shall be available at reasonable times for public inspection; (v) for authority comparable to that in section 303, and adequate contingency plans to implement such authority; and (vi) requirements that the State comply with the requirements respecting State boards under Section 128;

[PL 95-95, August 7, 1977]

(G) it provides, to the extent necessary and practicable, for periodic inspection and testing of motor vehicles to enforce compliance with applicable emission standrds;

(H) it provi les for revision, after public hearings, of such plan (i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of achieving such primary or secondary standard; or (ii) except as provided in paragraph (3) (C), whenever the Administrator finds on the basis of information available to him that the plan is substantially inadequate to achieve the national ambient air quality primary or secondary standard which it implements or to otherwise comply with any additional requirements established under the Clean Air Act Amendments of 1977; and

[PL 95-95, August 7, 1977]

(I) it provides that after June 30, 1979, no major stationary source shall be constructed or modified in any nonattainment area (as defined in section 171 (2) to

which such plan applies, if the emissions from such facility will cause or contribute to concentrations of any pollutant for which a national ambient air quality standard is exceeded in such area, unless, as of the time of application for a permit for such construction or modification, such plan meets the requirements of part D (relating to nonattainment areas);

[PL 95-95, August 7, 1977]

(J) it meets the requirements of section 121 (relating to consultation), section 127 (relating to public notification), part C (relating to prevention of significant deterioration of air quality and visibility protection); and

[PL 95-95, August 7, 1977]

(K) it requires the owner or operator or each major stationary source to pay to the permitting authority as a condition of any permit required under this Act a fee sufficient to cover—

(i) the reasonable costs of reviewing and acting upon any application for such a permit, and

(ii) if the owner or operator receives a permit for such source, whether before or after the date of enactment of this subparagraph, the reasonable costs (incurred after such date of enactment) of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action).

[PL 95-95, August 7, 1977]

(3) (A) The Administrator shall approve any revision of an implementation plan applicable to an air quality control region if he determines that it meets the requirements of paragraph (2) and has been adopted by the State after reasonable notice and public hearings.

(B) As soon as practicable, the Administrator shall, consistent with the purposes of this Act and the Energy Supply and Environmental Coordination Act of 1974, review each State's applicable implementation plans and report to the State on whether such plans can be revised in relation to fuel burning stationary sources (or persons supply fuel to such sources) without interfering with the attainment and maintenance of any national ambient air quality standard within the period permitted in this section. If the Administrator determines that any such plan can be revised, he shall notify the State that a plan revision may be submitted by the State. Any plan revision which is submitted by the State shall, after public notice and opportunity for public hearing, be approved by the Administrator if the revision relates only to fuel burning stationary sources (or persons supplying fuel to such sources), and the plan as revised complies with paragraph (2) of this subsection. The Administrator shall approve or disapprove any revision no later than three months after its submission.

[PL 93-319, June 24, 1974]

(C) Neither the State, in the case of a plan (or portion thereof) approved under this subsection, nor the Administrator in the case of a plan (or portion thereof) promulgated under subsection (c), shall be required to revise an applicable implementation plan because one or more exemptions under section 118 (relating to Federal facilities), enforcement orders under section 113(d), suspensions under section 110(f) or (g) (relating to temporary energy or economic authority) or orders under section 119 (relating to primary nonferrous smelters) have been granted, if such plan would have met the requirements of this section if no such exemptions, orders, extensions, or variances had been granted.

[PL 95-95, August 7, 1977]

(D) Any applicable implementation plan for which an attainment date later than December 31, 1982, is provided pursuant to section 172(a)(2) shall be revised by July 1, 1979, to include the comprehensive measures and requirements referred to in subsection (c)(5)(B).

[PL 95-190, November 16, 1977]

(4) The procedure referred to in paragraph (2)(D) for review, prior to construction or modification, of the location of new sources shall (A) provide for adequate authority to prevent the construction or modification of any new source to which a standard of performance under section 111 will apply at any location which the State determines will prevent the attainment or maintenance within any air quality control region (or portion thereof) within such State of a national ambient air quality primary or secondary standard, and (B) require that prior to commencing construction or modification of any such source, the owner or operator thereof shall submit to such State such information as may be necessary to permit the State to make a determination under clause (A).

GENERAL PROVISION RELATING TO ADMINISTRATIVE PROCEEDINGS AND JUDICIAL REVIEW

Sec. 307.

(b)(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 112, any standard of performance or requirement under 111; any standard under section 202 (other than a standard required to be prescribed under section 202 (b) (1)), any determination under section 202 (b) (5), any control or prohibition under section 211, any standard under sec-

tion 231 or any rule issued under section 113, 119, or under section 120 or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this Act may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 110 or section 111 (d), any order under section 111 (j), under section 112 (c), under section 113 (d), under section 119, or under section 120, or his action under section 119 (c) (2) (A), (B), or (C) (as in effect before the enactment of the Clean Air Act Amendments of 1977) or under regulations thereunder, or any other final action of the Administrator under this (including any denial or disapproval by the Administrator under Title I) Act which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination:

[PL 93-319, June 24, 1974; PL 95-95, August 7, 1977; PL 95-190, November 16, 1977]

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement.

FEDERAL REGISTER
Thursday
May 10, 1979

Part II

ENVIRONMENTAL
PROTECTION AGENCY

Ambient Air Quality Monitoring, Data
Reporting, and Surveillance Provisions

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52, 53 and 58

Air Programs; Ambient Air Quality Monitoring,
Data Reporting, and Surveillance Provisions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rulemaking.

SUMMARY: This final rulemaking sets forth ambient air quality monitoring and data reporting regulations which were proposed on August 7, 1978 (43 FR 34892). This action revokes the requirements for air quality monitoring in Part 51 and establishes a new Part 58 entitled Ambient Air Quality Surveillance. These regulations satisfy the requirements of Section 110(a)(2)(C) of the Clean Air Act (Act) by requiring ambient air quality monitoring and data reporting for purposes of State Implementation Plans (SIP). Criteria to be followed when measuring air quality and provisions for daily air pollution index reporting are established in Part 58 as required by Section 319 of the Act. Part 58 also contains

requirements for reporting to EPA certain data related to air pollution episodes so that the information can be included in EPA's annual report to Congress as required by Section 313, Additional Reports to Congress, of the Act. Requirements for public notification of information related to air quality standards violations are included in Part 51 in order to meet the requirements of Section 127, Public Notification, of the Act.

DATES: These regulations take effect upon promulgation.

FOR FURTHER INFORMATION CONTACT: William M. Cox, Monitoring and Data Analysis Division (MD-14), Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C. 27711, phone: Commercial—(919) 541-5312; FTS—629-5312.

SUPPLEMENTARY INFORMATION

Background

The preamble to the August 7, 1978, Federal Register proposal notice explained EPA's concern with the quality, completeness, and timeliness of air quality data collected at the State local level. The monitoring regulations proposed at that time were designed to eliminate the problems associated with data currently being submitted. The regulations being promulgated today are, with the exception of changes made due to public comment, the same as those proposed. The changes made and the substantive comments received are summarized under the appropriate headings below.

History

In October 1975, the Standing Air Monitoring Work Group (SAMWG) was formed at the request of the Dep-

uty Administrator of EPA. The request was made in response to recognition of deficiencies which existed in air quality monitoring and data reporting programs of State agencies. The purpose of SAMWG was to identify deficiencies and develop a program for correcting them. Accordingly, SAMWG was composed of representatives from EPA headquarters offices, EPA Regional Offices, and State and local air pollution control agencies.

In June 1977, the strategy document containing SAMWG's analysis and recommendations was published as: "Air Monitoring Strategy for State Implementation Plans," EPA-450/2-77-010, U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711, June 1977. Basically the recommendations called for optimization of monitoring networks and better controls on data collection and handling.

On August 7, 1977, the Clean Air Act was amended; one of the amendments being the addition of § 319 to the Act. This Section requires EPA to establish monitoring criteria to be followed uniformly across the nation. It also requires major urban areas to report a uniform daily index and provides that there be a national monitoring network to supplement but not duplicate monitoring for SIP purposes.

The recommendations of SAMWG and the § 319 requirements to a large extent overlap, especially in their intent, i.e., higher quality air monitoring data. The regulations proposed on August 7, 1978, therefore, addressed both SAMWG and § 319. EPA believes that the regulations being promulgated only will provide air monitoring data of acceptable quality; comparable data from all monitoring stations; optimum, cost-effective monitoring networks; and timely data submission for national assessment purposes.

General Discussion

It is apparent from reviewing public comments on the proposal that some confusion exists with respect to the regulations. Several commenters misunderstood the concept of the monitoring network and the data reporting requirements as set forth in the regulations. It is therefore appropriate at this time to provide another explanation of the concept. EPA is revoking § 51.17 (40 CFR Part 51) which previously required SIPs to provide for monitoring air quality and is promulgating Part 58 which contains new SIP monitoring requirements. Under the new regulations a State will establish a network of monitoring stations to monitor pollutants for which National Ambient Air Quality Standards (NAAQS) have been established. This new network will actually be the existing network with appropriate modifitions to conform to criteria contained in Part 58. The network will be designed such that stations are located in all areas where the State and the EPA Regional Office decide that monitoring is necessary. The stations in the network will be termed State and Local Air Monitoring Stations (SLAMS). The regulations do not specify how large the SLAMS network must be. The number and locations of the SLAMS will be jointly determined by the State and Regional Office as data needs dictate. The SIP will contain provisions for establishing and operating the SLAMS network. The data from the network will be condensed and reported annually to EPA in a summary report. The data from which the report is generated will be available to EPA upon request if more detailed data are required for some purpose. States may, however, wish to store the data in the EPA National Air Data Bank (NADB) if facilities are not available otherwise. Using the NADB for full data storage will not relieve the State of the responsibility of seeing that a summary report is submitted each year.

It is anticipatedthat in most instances the new SLAMS network will be smaller than existing networks. Certain stations that are in areas with air quality consistently better than the NAAQS are, in general, unnecessary. Such stations can be eliminated. The majority of stations that will be eliminated from existing networks in order to form the SLAMS network will likely be high-volume Hi-vol) samplers for particulate matter and SO_2 bubblers. The stations remaining in operation, relocated stations, or new stations will then all be termed SLAMS and make up the SLAMS network for purposes of the SIP. If the State wishes to continue to operate any station or establish a new station which is not a SLAMS, it may do so. The station will not be considered a SLAMS and will not be subject to any requirements including data reporting. These additional stations will be termed Special Purpose Monitoring (SPM) stations. If, however, the State wishes to use data from an SPM station as support for a SIP revision or control strategy demonstration, then the requirements applicable to SLAMS, otherthan reporting, must be met in order that the data be of acceptable quality and comparability. The SPM stations could be used, among other things, to do special research studies, to monitor around a point source for a short period, to determine if a specific area may need a permanent SLAMS, or to monitor for pollutants for which NAAQS have not been established.

Stations used to determine the impact of a source for purposes of Prevention of Significant Deterioration (PSD) would not be part of the SLAMS network nor would they be considered SPM stations. PSD stations, in general, would be operated only for periods of up to a year and would be operated by the source owner or operator although a SLAMS could also serve as a PSD station. In order that the PSD data be of acceptable quality and comparable to SLAMS data, quality assurance requirements for PSD stations are included in Part 58.

The fourth type of station covered by the regulations is the National Air Monitoring Station (NAMS). The regulations do not require establishing a separate network of NAMS. The NAMS will be stations selected from the SLAMS network. These stations will also continue to be SLAMS and will be subject to all SLAMS requirements, including the annual summary report. The only distinguishing characteristings of NAMS will be:

1. Only continuous instruments will be used to monitor gaseous pollutants.

2. The regulations specify a minimum number of NAMS and locations for them.

3. Data from NAMS, in addition to being included in the annual SLAMS summary report, will be reported quarterly to EPA.

The NAMS concept of being established in order to provide timely data to EPA from a national network for national data analysis. The amount of data that will be reported quarterly to EPA will be considerably less than that required in 40 CFR 51.7, Reports, which is being revoked. The concept of the NAMS addresses the requirements of § 319 of the Act to establish a national network. It is inconceivable that monitoring would be required in any area for national analysis but not for SIP purposes. Any area where a NAMS is needed, therefore, would be an area which should be covered by a SLAMS. In order to avoid duplication of effort, the NAMS will simply be a subset of the SLAMS instead of a separate network measuring air quality in areas already being measured by SLAMS.

A most important point to understand is that, while there are minimum numbers of NAMS that must be established, these minimum numbers are not a minimum for the SLAMS network. There is no minimum or maximum size for the SLAMS network. The size of the

SLAMS network is to be determined based on characteristics of any one area or State such as meteorology, geography, population, and emission density. The NAMS will typically be those SLAMS which represent locations such as those having high pollutant concentrations, high population exposure, or a combination of both. The NAMS are being established only for the purpose of providing EPA with timely data from the more important stations across the nation. EPA does not believe that the small number of NAMS will be adequate to meet all of the SIP monitoring objectives. It is anticipated that the number of NAMS will only be from 10% to 40% of the total number of SLAMS.

The final point to be made with respect to this subject is that EPA's use of air quality data will not be limited to NAMS. Important judgments or decisions will be based on all data available which will include SLAMS data.

In summary, there will be only one monitoring network; the SLAMS network. Any additional monitoring the States wishes to do will be SPM monitoring subject to no requirements unless used for SIP purposes. Source owners or operators will operate PSD stations, from which the data will be periodically reported to the permit granting authority. A certain number of select stations from the SLAMS network will also be termed NAMS, the data from which will be subject to an additional reporting requirement.

Reorganization of Part 51

In an effort to make Part 51 more readable and understandable, EPA is reorganizing and expanding the format of the regulations. The restructured regulations will contain numerous subparts containing material formerly organized as sections. More headings will be used and the reader will be able to more readily find appro-

priate requirements. Regulations being promulgated today in Subparts J, O, and Q of Part 51 are in the new format. Subsequent to this promulgation, other sections of Part 51 will be rewritten and reorganized utilizing the new format.

Ambient Monitoring for Lead

The preamble to the proposal of these monitoring regulations on August 7, 1978, stated that the regulations requiring ambient lead monitoring (43 F R46264) would be incorporated into Part 58 in this promulgation. Those lead monitoring regulations which were promulgated October 5, 1978, in § 51.17(b) of Part 51 required the plan to provide for establishing lead monitoring stations; specified an operation schedule of one 24-hour sample every six days; required that a description of the monitoring system be available; specified a two-year time limit on station establishment; and reference a guideline, *Supplementary Guideline for Lead Implementation Plans*, which contained additional information on monitor siting. The lead monitoring regulations were promulgated simultaneously with the lead NAAQS.

At the time of promulgation of the lead regulations, quality assurance criteria had not been developed for lead. Rather than incorporate the § 51.17(b) regulations alone into Part 58 in today's promulgation, EPA will propose and promulgate in Part 58 all the lead regulations in one action which will include the § 51.17(b) monitoring regulations, the siting criteria from the lead guideline, and quality assurance criteria for lead which is under development.

Accompanying the October 5, 1978, promulgations of the lead regulations and lead NAAQS was an Advance Notice of Proposed Rulemaking (ANPR) concerning ambient lead monitoring around primary and secondary lead smelters and primary copper smelters. The notice indi-

cated that EPA was considering regulations to require such point source monitoring in order to determine if the sources were causing violations of the lead NAAQS and whether additional or alternative control strategies would therefore be necessary. The notice also indicated that a guideline would be developed covering the number of necessary monitoring stations and siting parameters for monitoring around point sources. The guidelines have been prepared—one for short-term monitoring to obtain ambient lead air quality data essential for the development of a lead control strategy (*Guideline for Short-Term Lead Monitoring in the Vicinity of Point Sources*); the other for longer term monitoring in order to determine if point sources will cause NAAQS violations after the attainment date and to estimate the contribution of fugitive emissions to such violations (*Guideline for Lead Monitoring in the Vicinity of Point Sources*).

EPA has reevaluated the need for specific regulations for lead monitoring around point sources and concludes that monitoring point sources to determine NAAQS violations is an objective of the SLAMS network. In designing a lead SLAMS network, the States and Regional Offices should follow the long-term guideline *(Guideline for lead Monitoring in the Vicinity of Point Sources)* in order to assure that emissions from the point sources are adequately monitored. An alternative would be for the State to require the point source to conduct the monitoring and report the data to the State. The data could then be used for control strategy purposes provided they were collected in accordance with the long-term point source guideline.

Until such time as the lead monitoring regulations, siting criteria, and quality assurance requirements are incorporated into Part 58, States would be expected to follow the siting and quality assurance criteria in the long-term point source monitoring guideline.

Public Comments

The object of Federal Register proposals is to allow comments on new regulations prior to thier promulgation thereby providing an opportunity for the public to participate in rulemaking. The bulk of the regulations proposed August 7, 1978, were new regulations; however, some of the regulatory material was simply being recodified. The content or meaning of the recodified regulations was not changed; the requirements were simply restructured and placed in new sections or appendices. Eventually all of 40 CFR Part 51 will be restructured in an effort to make Part 51 more readable and easier to use. The recodification taking place in these regulations is one of the first steps toward the Part 51 restructuring.

Even though the proposal preamble specified which regulations were not being changed, other than being restructured, EPA received public comments on some of those unchanged regulations. The comments on the unchanged regulations will be noted in this preamble but EPA will not entertain suggestions for changing these regulations at this time since the object of the proposal was not repropose the regulatory content. The comments may be used in the future to determine the need for reproposing and updating the regulations.

EPA received forty-six written comment letters on the proposal of August 7, 1978. The origin of the letters is as follows:

Federal Agencies	1
Private Citizens	1
Industry	15
State Air Pollution Control Agencies	16
Local Air Pollution Control Agencies	13
Total	46

The following discussion covers the substantive public comments from the letters and any oral comments received. The discussion is organized by subject matter. No

public comments were received on certain portions of the proposed regulations; therefore, no discussion of those portions of the regulations appears in this preamble. For example, no comments were received on the regulations proposed in response to § 127, Public Notification, and § 313, Additional Reports to Congress, of the Act. This preamble primarily discusses only the public coments. Detailed discussion of the regulations can be found in the preamble to the August 7, 1978, proposal.

The full text of the letters and summaries of individual comments together with the action taken by EPA and justification for that action will be available for public inspection during normal business hours at the Public Information Reference Unit, 401 M Street, S.W., Washington, D.C. 20460.

General Comments

The comments discussed under this heading were not specific to any regulation or appendix but were general comments or were comments on some aspect of the monitoring program covered by the regulations.

One commenter requested a public hearing and an economic impact statement on § 51.25(n)(3) which requires quality assurance procedures be applied to PSD monitoring. The reasoning given for the request was based on the impact of the PSD program. These regulations are not concerned with the PSD program except to apply quality assurance requirements to PSD monitoring. The impact of just the PSD quality assurance requirements falls far short of a level that would require an economic impact statement. This comment would have been appropriately made in response to the PSD regulations which were proposed in the Federal Register on November 3, 1977 (42 FR 57471).

One commenter felt that EPA should store and distribute air quality data collected at PSD stations because

the cost of making it available to the public is prohibitive to the States. EPA suggests that the cost of reproducing and providing data to the public could be recovered by the States through fees for such a service. Handling PSD data at the State level where it is used will be much more cost effective than EPA collecting, storing, and providing the public with data from all over the nation.

Two commenters suggested that EPA should make data from all stations (SLAMS, PSD, SPM) available to the public within 90 days of the end of each quarter. Experience with obtaining air quality data shows this to be an unworkable suggestion. One of the main purposes of the NAMS concept is to mitigate data reporting problems by striving to get just a portion of the data from the SLAMS network to EPA within 90 days. The resources it would take to get all data in within 90 days could not be justified. Also, the historical usage of data from the NADB indicates no need for availability of all SLAMS data within 90 days. Concerning SPM data, the definition of SPM stations provides that the data are primarily for the State's use. Data storage for PSD stations was discussed above.

Two commenters stated that there should be only one type of station and that all data should be used for national assessment. The reasons for the types of stations were discussed under the heading "General Discussion" above. The discussion also pointed out that all SLAMS data will be used by EPA in the course of making important decisions or assessments.

One commenter stipulated that special purpose monitoring should be used for such things as particle sizing, or background. SPM stations may be used for such purposes but EPA, because of the definition of SPM stations, will not set forth such a requirement. The factor most affecting the degree to which a State carries out special purpose monitoring is the availability of resources. EPA

does not wish to interfere with the allocation of any monitoring resources available to a State above those resources needed to implement the regulations being promulgated today.

One commenter emphasized the need to analyze air quality data on the basis of geographical distinctions. EPA and the States take into account geographical, meteorological, and other characteristics of monitoring sites when evaluating ambient air quality data.

One commenter suggested that State air quality monitoring networks include stations in remote locations to determine background or general pollution levels. EPA feels that sufficient monitoring to determine background is already underway and will remain so through monitoring stations operated by EPA, Sta tes, other federal agencies, PSD sources, etc.

Eight commenters objected to the elimination of certain stations that will occur when networks are trimmed down to form a cost effective SLAMS network. The basis for the objection is that these stations have provided historical data upon which trends can be based. EPA does not feel that resources necessary to continue collecting data of questionable quality can be justified for trends purposes. In some cases the historical data quality is simply not acceptable enough to preserve the site. Even for sites which have provided good quality data, resources would be much better utilized in upgrading the entire network as these new regulations require rather than continuing to operate unnecessary stations. One solution, however, would be for the States to operate SPM sta' ons at the sites in question.

One commenter felt that EPA should declare valid all data collected prior to today's promulgation if the analyzers meet the requirements of 40 CFR Part 53 pertaining to reference or equivalent methods. EPA cannot

make such a blanket declaration because the status of an analyzer at the time of installation is not the only factor which affects data validity. Siting of the instrument and continued proper operation of the analyzer can easily affect data quality. Also, it is not necessary to obtain EPA approval in order to use previously collected data. The preamble to the August 7, 1978, proposal discussed using historical data. To summarize that discussion, the degree to which historical data can be used depends on the intended use of the data and the degree to which various factors have affected the data quality.

One commenter was concerned that the regulations do not apply to local air pollution control agencies. It is true that the regulations are in terms of requirements on States; this reflects the language of the Clean Air Act. The States must see that regulatory requirements are met, but they can be met by a local agency to which the State has delegated certain actions. In such an instance, the State would still have the responsibility to see that requirements are met. The regulations are thereby indirectly binding on local agencies.

Three commenters stated that the material in the appendices to Part 58 should be in guideline form. One of the commenters suggested that the regulations could then require the guidelines to be followed. Such an approach would not meet EPA's intent. Guidelines are for the purpose of indicating ways in which regulatory requirements may be carried out. Guidelines are not necessarily binding and can be deviated from or not followed at all. EPA has published guidelines on monitor siting and quality assurance but the existence of those guidelines did not prevent the current problems with data quality. EPA's intent is to establish binding criteria which will be followed. The appendices have undergone the same review procedures as the regulations and are to be considered as regulations. Also, by putting the material in

regulatory form, no changes can be made without proposal for public comment in the Federal Register. Guidelines may be changed without any notice at all. Finally, § 319 of the Act requires that EPA promulgate air quality monitoring criteria to be uniformly used nationwide.

Two commenters felt that certain portions of the regulations should be reproposed. None of the regulations have been substantively changed enough since proposal to warrant reproposal. All significant changes that have been made are due to public comment. Accordingly, no portions will be reproposed.

Two commenters requested a public hearing on the regulations; however, these requests were later withdrawn. Since no other interest was expressed, no public hearings was held.

One commenter asked that EPA describe in the regulation a "scientific method for extrapolating the boundaries of a nonattainment area from a given ambient monitoring site." The commenter contends that there exists an adequate body of scientific knowledge to permit extrapolation of ozone nonattainment areas for many hundreds of miles. EPA disagrees and does not believe that sufficient information is now available to prescribe a scientific method for determining nonattainment boundaries around a single monitoring station.

In a related matter, EPA recently responded [43 FR 6395] to comments submitted by the State of New Jersey which challenged the Agency's policy for designating areas as attainment, nonattainment, or unclassifiable for the ozone standard. New Jersey has argued that sufficient technical evidence is available to require that EPA mandate a nonattainment designation for all areas in the eastern half of the country. In that notice, the Agency determined that the scientific information relied upon by

New Jersey is not definitive enough to require that all areas in the eastern portion of the country be designated nonattainment.

The regulations being promulgated today reflect the fact that monitoring stations are representative of only a finite area within the vicinity of a station. Appendix D to Part 58 describes the concept in terms of spatial scale of representativeness which means the physical dimensions of the air parcel nearest a monitoring station throughout which actual pollutant concentrations are reasonably similar. States are being asked to examine their monitoring stations and apply the concepts described in Appendix D to classify each station according to the most appropriate spatial scale of representativeness. Such a determination requires the knowledge and a case-by-case judgment of personnel who manage and operate ambient monitoring networks. Factors to be considered by agencies in making these judgments include: (1) the size and proximity of nearby sources, (2) geographical and topographical features around the station, (3) pollutant formation and transformation processes, (4) placement of the monitoring station relative to buildings, air flow obstructions, street canyons, etc. These factors have a significant impact on spatial concentration patterns and, thus, are important determinants of the size of the area around a monitoring station having reasonably homogeneous air quality.

EPA has one study underway that will attempt to determine the horizontal representativeness of ground level ozone measurements and the suitability of data collected by aircraft as an indicator of ground level ozone air quality. Ozone was chosen for this study since many ozone monitors nationally are showing days exceeding the ozone NAAQS and because of the controversy that exists over the spatial representativeness of a single ozone monitor. The results of this study will not be avail-

able for several months but will provide agencies with additional technical information for classifying SLAMS ozone stations and for reevaluating the boundaries of nonattainment areas.

In some situations, special purpose monitoring studies could be initiated by agencies to determine reasonable boundaries for which data from a station (or class of stations) are representative. Such a study might include simultaneous measurements of pollutant levels at varying distances from the station to be classified. These studies are, however, expensive to conduct and may produce results which are applicable only to the station being evaluated. EPA will continue to provide additional guidance to States for determining the representativeness of stations as scientific data are accumulated and analyzed.

Several commenters asked that EPA specify the minimum number of stations that are needed to define the extent of nonattainment for any given pollutant. As indicated in Appendix D, EPA does not believe that it is practical to prescribe a set of criteria for determining the number of stations that would be applicable for all States. Factors that influence the size of a network and must be considered when designing a network which includes the objective of defining the extent of nonattainment are emission inventories, climatological summaries, and local geographical characteristics. These factors can vary widely from one area to another thus prohibiting the specifications of a minimum number of stations for all States. The optimum size of a particular SLAMS network must be determined on a case-by-case basis.

Two commenters stated that some provision should be made for nonattainment areas that have been designated on the basis of data from improperly sited stations. The basic purpose for the criteria in Appendix E to Part 58 for siting monitors are twofold: (1) to promote uni-

formity in location of new monitoring stations, and (2) to classify existing stations in terms of the most appropriate spatial scale of representativeness. The emphasis is, thus, on improving the base of monitoring information needed for making informed judgments about air quality. Classification of existing stations according to the most appropriate scale of representativeness will make data more comparable among stations having similar classifications and will also provide an improved basis for determining the geographical scope of nonattainment. In most instances, stations not technically meeting the siting criteria given in Appendix E cannot be excluded for purposes of attainment/nonattainment. These stations are simply measuring air quality over a scale smaller than would be expected if the siting criteria were strictly adhered to. The implication is that the scope of a nonattainment area is linked to the actual spatial scale of representativeness of a monitoring station—the smaller the scale of representativeness at the station, the smaller the geographical extent of nonattainment.

In some cases, existing stations may be producing data not suitable for purposes of nonattainment decisions. On September 11, 1978, a Federal Register notice (43 FR 40412) was published which amended nonattainment area designations as required by section 107 of the Clean Air Act. The preamble to that notice discussed provisions that should be made as a result of TSP monitors not sited in accordance with EPA siting criteria.

The policy stated for TSP in that notice was that only those monitoring sites which are unduly influenced by reentrained road dust can be excluded for establishing the design values for SIP development work and for purposes of nonattainment area designation. As explained in that notice, an evaluation could be conducted to determine if roadway influence is significant enough to warrant disregarding the data from the monitor. A simi-

lar rationale could be applied for determining the appropriateness of nonattainment reclassification for other pollutants.

Resources

Several commenters pointed out the need for additional resources in order to meet the requirements of the regulation involving instrumentation, siting, and quality assurance. EPA recognizes that in many instances, additional resources are needed and have been making increased allocations to the States for monitoring through the Section 105 Grants mechanism. For example, in FY-1979, increases over FY-1978 allocations amounted to an average of 500 thousand dollars per EPA Region. This includes a total of 360 new analyzers to be purchased nationally using FY-1979 Grants and State matching funds. Similar increases in allocations are expected for FY-1980 since the total 105 Grant monies available has been increased.

Public Comments—Regulations

The following discussion covers the comments received on specific regulations.

Section 51.322 Sources subject to emissions reporting. One commenter stated that emissions from sources smaller than the cut-off size stipulated in the regulations should be allowed to be reported in the annual emissions report. The regulations only establish the lower size limit for sources which must be included in the report. The regulation does not prevent States from including smaller sources. Smaller sources are currently included in the emissions report and may continue to be.

One commenter felt that the emissions reporting effort was of little value and should be re-evaluated. Historical usage of the emissions data in the NADB indicates ample

justification for emissions reporting. The emissions data in the NADB have been and are being used in conjunction with such things as establishing new NAAQS, determining the impact of New Source Performance Standards, establishing energy policies, developing national emissions trends, and formulating volatile organic compound emissions control policies in ozone nonattainment areas.

Section 51.323 Reportable emissions data and information. One commenter pointed out that the Hazardous and Trace Emissions System (HATREMS) had not been released for use. This was true at the time of proposal but the system is now ready to accept emissions data.

Two commenters stated that new emissions data for a source should not be required to be submitted unless the emissions have changed by a specified amount. EPA agrees and has revised the regulations to require reporting of new emissions data only if the emissions have changed by 5% or more since the last time the emissions were reported. The regulation continues to require a yearly update of the year of record of data which did not change. The intent of the revisions to this section is that the data in the NADB always be up-to-date either by having it submitted in the last annual report or by having the year of record of unchanged data updated.

One commenter pointed out that § 319 of the Act did not cover emissions reporting and that the new requirements would create an additional burden on States and emissions sources. It is true § 319 does not deal with emissions reporting, but only a portion of the regulations being promulgated today are in response to § 319. Some of the regulations are in response to SAMWG recommendations. The bulk of the requirements pertaining to emissions reporting, however, are not new but are simply being restructured. The emissions reporting regulations

have been in effect since August 3, 1973, and have been in § 51.7 of 40 CFR Part 51. The minor revisions that are being made should actually reduce the burden on resources by changing the semi-annual report to an annual report and extending the period within which it must be submitted.

One commenter indicated that compliance with the Storage and Retrieval of Aerometric Data (SAROAD) format for emissions data would create an additional burden. The requirement to report emissions is in terms of the National Emissions Data System (NEDS) and not SAROAD. The SAROAD format is for reporting ambient air quality data.

Section 58.1 Definitions. One commenter felt that the definition of "local agency" should include Indian tribes to which the State has delegated authority to carry out a portion of the monitoring program. In response to this comment, definitions of "Indian Reservation" and "Indian Governing Body" have been added to § 58.1. Also, in § 58.3 the applicability of the regulations has been extended to Indian Governing Bodies which have been delegated authority to monitor for SIP purposes.

Section 58.14 Special purpose monitoring. One commenter felt that no SPM activity would be conducted if the data could not be used for SIP purposes. As discussed above, SPM data can be used for SIPs if the criteria applicable to SLAMS are followed. SPM activity is strictly at the discretion of the State for any purpose the State wishes.

Section 58.20 Air quality surveillance: Plan content. One commenter pointed out that this section requires submittal by January 1, 1980, of the SAROAD site Identification (ID) form for each SLAMS, but some of the SLAMS will not be located at that time and no forms will be available for those stations. An appropriate cor-

rection has been made to § 58.20 to require that on January 1, 1980, a schedule be submitted which would include a time frame for submission of site ID forms for those stations which were not in existence on January 1, 1980.

Section 58.21 SLAMS network design. One commenter stated that the Regional Offices of EPA should have no control over the design of the SLAMS network. Such a suggestion is contrary to the intent of the regulations. The purpose of EPA participation in network design is to insure that all monitoring necessary for purposes of the SIP is carried out. The responsibilities of EPA with respect to monitoring are comparable to those responsibilities the Agency has of seeing that SIPs contain the proper control regulations. Accordingly, a statement has been added to § 58.21 that the final SLAMS network design is subject to the approval of the Regional Administrator.

Section 58.23 Monitoring network completion. One commenter suggested that SLAMS in nonattainment areas should be located and meet the monitoring criteria earlier than the January 1, 1983, compilance date established in this section. The completion date of January 1, 1983, applies to the entire SLAMS network. For those stations which will also be designated as NAMS, however, the completion date is January 1, 1981. As previously stated, the NAMS will be certain select stations from the SLAMS network and will represent such areas as those of highest pollutant concentration or high population exposure. EPA feels that through the NAMS mechanism, acceptable data will be available at the earliest date that is economically feasible in most cases. These completion dates for SLAMS and NAMS are only deadlines. If States wish to complete the network at an earlier date, they may do so.

Section 58.24 Interim network. This section was added to the regulations to provide that monitoring continue between today's date (§ 51.17 is being revoked today) and when the new monitoring plan is submitted on or before January 1, 1980. Without this section there would be no requirements for monitoring during that interim period. It has been decided, however, that this requirement is unnecessary since the existing SIPs contain monitoring provisions and those SIPs will not be revoked until the new monitoring plans are submitted. This section is therefore deleted. If any revisions to the existing monitoring plans are submitted, they will be approved only if consistent with the new requirements being promulgated today. SIP revisions which have been submitted and were being acted upon prior to day's date will be judged in light of the former requirements under which they were submitted if the State wishes. The State will, however, be notified of any inconsistencies with these new monitoring regulations.

Section 58.26 Annual SLAMS summary report. One commenter requested that the EPA Regional Office generate the annual SLAMS report. The regulations requiring the annual report place the responsibility for the annual report on the State. How or where the report is produced is at the discretion of the State. In many cases the SLAMS data from which the annual report is generated will be submitted through the Regional Office for storage in the NADB. For those States who have their own storage facilities for their SLAMS data, the Regional Office might not haev access to the data and so would not be able to generate the annual report.

One commenter stated that certification of the annual report by the State program director would serve no useful purpose. The regulation has been changed to read "the senior air pollution control officer in the State or his designee." The requirement is being retained because

EPA feels that it is the responsibility of the State to certify that data are accurate. Any EPA decisions based on such certified data can then be made with more confidence than would be the case if States were not required to check the accuracy of the annual report.

Section 58.35 NAMS data submittal. One commenter could not find data validation procedures in the AEROS Users Manual and another commenter requested that the validation procedures be published as an appendix and be proposed for comment. At the time of proposal the procedures had not been added to the AEROS manual but this task has now been completed. The regulation has been changed to require that data be edited and validated. The regulation then states that procedures for doing so can ge found in the AEROS Users Manual. The manual, therefore, acts as a guideline. EPA does not feel it appropriate to make the editing and validation procedures regulatory. Validation procedures are too broad in scope and new procedures are evolving too rapidly to establish specific procedures. A regulatory approach would hamper innovative validation ideas.

One commenter felt that it should be made clear that the SLAMS annual report does not satisfy the requirements for a NAMS quarterly report. Hopefully, this has been done above under the heading "General Discussion."

Section 58.50 Federal monitoring. One commenter suggested that because of this section federal monitoring may be the only monitoring done in the commenter's State. The language in this section is simply a statement of an action that the Administrator may choose and reflects the language of § 319 of the Act. Section 319 requires federal monitoring to supplement but not duplicate State monitoring carried out for purposes of the SIP. This requirement deos not assume that no SIP monitoring will be done.

One commenter stated that any federal monitoring should follow the criteria set forth for the States to follow and another commenter felt that renegotiation with the State should take place before federal stations are established. Any federal monitoring will follow the criteria as established in Part 58. If the possibility of federal monitoring exists, the State will be notified and given the opportunity to operate a station in the specific location under consideration.

Section 58.51 Monitoring other pollutants. One commenter thought that public comment would severly slow down action on the establishment of criteria for monitoring other pollutants. The regulation, however, only states that he Administrator *may* promulgate such criteria. Such criteria could be established in guideline form.

One commenter felt that such a network would not be limited to urban areas. The reference to urban areas has been removed from this section.

Public Comments—Appendices A and B

Due to the similarity in Appendices A and B, public comments on both appendices will be addressed under the following discussion.

Two commenters suggested that the appendices should allow audits of analyzers to be done with less than five audit points or concentrations per audit. Also, one commenter requested that audit concentrations include higher concentrations such as those encountered during air pollution episodes. Both appendices have been revised to require audits at only three concentration levels for normal monitoring and four concentrations in the case of extended range monitoring for high pollutant concentrations. Accuracy of monitoring data will now be assessed at each audit point rather than using all audit points to calculate a single accuracy value from a regression equa-

tion. With this modification, accuracy can be adequately assessed with a reduced number of audit points.

Two commenters stated that the allowable intervals for generating audit concentrations are too small. Both appendices have been revised to allow larger concentration intervals at each audit level. These broadened intervals will still allow accuracy to be assessed adequately and will make generation of audit values easier.

Three commenters felt that the audit rate is too frequent. EPA disagrees and feels that periodic auditing of once per quarter is needed to assess accuracy of data. Auditing less frequently than quarterly would be inadequate for accuracy assessment.

A number of different comments were addressed to the portions of Appendices A and B concerning control of the quality of data through policies and procedures. As a result of considering the public comments, the quality control portions of the appendices have been rewritten. The nature of this change is described below after the following discussion of the public comments.

Seven commenters felt that five upscale points plus zero are more than required to accurately define a calibration curve. Eight commenters suggested that weekly span checks be performed at a higher range. Four commenters felt that the acceptable limit for span drift is too large. One commenter requested that a zero check be performed. Three commenters stated that when acceptance limits for span checks are exceeded and corrective action is performed, a span check should be performed to determine if a complete recalibration is necessary. Six commenters were concerned that the proposed appendices provided no directions on whether, and how, to adjust analyzers for zero and span drift. One commenter stated that instrument calibration in a laboratory and subsequent transportation to the field is pre-

cluded by the wording of the proposed appendices. Five commenters felt that span checks should not be required if the checks will interfere with monitoring during an air pollution episode and one commenter was concerned that no directions are given on validation of data as a result of span checks. One commenter suggested allowing zero, span, and calibration gases to be introduced directly into the instrument and not through a manifold.

Consideration of the above comments brought about a reanalysis of the need for the detailed quality control requirements that had been proposed in Appendices A and B. The quality assurance program now required by Appendices A and B is based on two distinct and equally important functions. The first function is quality control which consists of controlling the quality of data through policies and procedures such as calibration practices, zero and span checks and adjustments, preventive maintenance schedules, and training and expertise of operators. The second function is the assessment of the data quality in terms of their precision and accuracy. For the sake of national uniformity, the assessment function is specified quite explicitly in the appendices. From review of public comments, however, it became apparent that the explicit quality control requirements which were proposed in Appendices A and B were not appropriate due to the nature and complexity of quality control. There are many problems or situations which can better be solved at the State level and which detailed requirements cannot account for. Accordingly, the quality control requirements have been revised and are now specified in general terms. The States are required by Appendix A to develop a detailed quality control program which is acceptable to the Regional Administrator. A State can now design a quality control program which is specific to its situation and which will be approvable as long as it provides for data of acceptable quality.

Two commenters requested a definition of agency with respect to precision and accuracy reports. The concept of a "reporting organization" has been introduced in Appendix A and a definition provided. Precision and accuracy should be reported for groups of monitors having the same laboratory and field support. The concept of a reporting organization provides for such reporting.

One commenter felt that collocated monitors for manual methods should not be fixed but should be permitted to be rotated throughout a State. In order to provide for precision and accuracy analyses for each reporting organization, collocated monitors must be maintained in each area covered by a reporting organization. The requirement for two collocated sites for manual methods in each area covered by a reporting organization will be retained.

One commenter pointed out that many station site configurations will not allow collocated monitors to be three meters apart. A wording change has been made to require collocated monitors to be between two and four meters apart.

Three commenters stated that the "t" statistic should be used in equations five and six of Appendix A and equations four and five of Appendix B rather than the "z" statistic. EPA disagrees and is maintaining the "z" statistic which is appropriate for probability limits.

One commenter requested that EPA emphasize the fact that traceability of calibration and audit gases to the National Bureau of Standards (NBS) standard reference materials (SRM) does not mean using NBS SRM's as the calibration or audit standards per se. Also, one commenter suggested allowing traceability of calibration and audit gases to the same set of NBS SRM's. Language has been added to Appendices A and B to allow for these two suggestions.

One commenter stated that the quality assurance program would cause delays in data submittal due to audits and removal of suspect data. EPA disagrees that delays will occur and maintains that audits are a necessary part of quality assurance.

One commenter felt that a system audit should be required for PSD monitoring. Appendix B has been revised to allow the permit granting authority or EPA to conduct a system audit.

One commenter asked when the requirements of Appendix B take effect. The regulations have been revised to specify that for new stations, the requirements take effect when the station is established, and for existing stations, the requirements take effect at the discretion of the permit granting authority, but no later than January 1, 1980.

Public Comments—Appendix C

Since Appendix C was proposed on August 7, 1978, portions of Section 2.6 and the entire Section 4 have been rewritten. One purpose of these revisions is to allow analyzers to be used for monitoring during those times whenair pollution levels rise above the ranges on which the analyzers have been designated for use as reference or equivalent methods. If higher, undesignated ranges are used, the use of the analyzer would no longer be considered a reference or equivalent method and would not be approved for use in a SLAMS. Provisions in the regulations were needed which indicated that monitoring should continue during periods of high concentrations and stipulated the acceptable ranges for use during those periods. Such provisions have been added to Appendix C in Section 2.6. Section 4 of this appendix addresses the problem of short-term particulate measurements for purposes of tracking air pollution episodes. The reference method for particulate mater, the Hi-vol sampler, is not

designed to give real time data. Section 4 describes instruments that may be used for short-term measurements of particulate matter.

As revised, Section 2.6 of Appendix C allows an analyzer to be used on a range higher than that designated for the analyzer if it is an analyzer approved for use as a reference or equivalent method, or on a range higher than the range accepted for use under Section 2.5 of this appendix. Section 2.5 allows an analyzer which has not been designated for use as a reference or equivalent method to be used if it were purchased before February 18, 1975, and if it passes all the performance specifications for reference or equivalent methods except the range requirement found in Table B-1 of 40 CFR Part 53. The range accepted for use must not extend to higher than two times the range limit of Table B-1.

The higher ranges allowed by Section 2.6 are in two categories. The first category is a range less than or equal to two times the Table B-1 limit. The second category is a range more than two times the Table B-1 limit. Use of the higher ranges is limited to areas where and to periods of time when, high concentrations are likely to occur. This restriction will require the use of the most sensitive range capable of measuring any given concentration. The restriction is not meant to cause a continual switching of ranges (unless an instrument does this automatically) when concentrations frequently vary between two ranges. Through a case-by-case determination, certain analyzers may be continually operated at a higher range during seasons and in areas where concentrations occur in that range frequently enough to justify continual operation.

Section 4 requires, for purposes of particulate episode monitoring, use of methods which give real time data such as modified Hi-vol procedures, tape samplers, or any other appropriate device. In order to use methods

other than the Hi-vol, however, a quantitative relationship to the Hi-vol (operated under reference method procedures) must be established at the site where the method will be used. It is necessary to establish a site-specific relationship because the relationship between Hi-vols and other methods varies with location. Procedures for establishing a quantitative relationship are contained in "Guidance for Selecting TSP Episode Monitoring Methods," OAQPS No. 1.2-114.

As now written, Appendix C provides that all pollutants for which NAAQS have been established, except lead, should be monitored during periods of high concentrations so that real-time data will be available for tracking air pollution episodes. Such short-term monitoring is not required for lead because episode levels have not been established for that pollutant.

The following discussion covers the substantive public comments received on Appendix C.

One commenter requested an explanation of Section 2.2 which allows SO_2, CO, or O_3 analyzers purchased prior to February 18, 1976, to be used until February 18, 1980, and allows NO_2 analyzers purchased prior to January 3, 1978, to be used until January 3, 1980. This section is only meant ot limit the use of non-reference or non-equivalent methods until the two deadline dates. Any instrument designated for use as a reference or equivalent method may be used indefinitely unless the designation is withdrawn.

Four commenters stated that it would be too costly to replace after February 18, 1980, SO_2, CO, O_3 analyzers which have not been approved for use as reference or equivalent methods. This requirement in Sction 2.2 is not a new requirement but was promulgated on February 18, 1975, in 40 CFR 51.17a. The requirement was established to allow States adequate time to replace

analyzers requirements or for which equivalency testing would not or could not be done for various reasons.

One commenter suggested that EPA perform equivalency tests on analyzers that the manufacturers were untinterested in testing. Considering the time period that has been allowed for analyzer replacement, the number of analyzers that would have to be tested, the unreasonably costly modifications that would have to be made to some analyzers, and the resource constraints on EPA, such a suggestion cannot be justified.

One commenter felt that the range requirement for reference or equivalent methods should be increased by two. A range up to twice that allowed in Table B-1 of 40 CFR Part 53 is currently permitted under 53.20(b).

Four commenters indicated that the current reference method for particulate matter measures large particules which do not cause health related effects. One of the commenters suggested a more comprehensive monitoring system that determines size and composition of particles. The existing NAAQS for particulate matter are for total suspended particulates as measured by the existing reference method (the Hi-vol). The regulations being promulgated today do not modify the particulate matter NAAQS nor the reference method. The standard for particulate matter is currently being re-evaluated as required by the Clean Air Act. Any changes to the standard and to the reference method will be made as a result of that re-evaluation.

One commenter was confused as to how Coefficient of Haze (COHs) will be replaced in 40 CFR 51.16 and Appendix L to Part 51. The action to remove COHs resulted from the fact that there is no single, nationally consistent relationship between the tape sampler, which provides particulate concentrations in terms of Coefficient of Haze (COHs), and the Hi-vol which provides

data in terms of micrograms per cubic meter. Appendix C allows the use of tape samplers for air pollution episode monitoring, but only if a quantitative relationship to the Ho-vol is established at the use site. The tape sampler data can then be translated directly into micrograms per cubic meter, eliminating the need to express the data in terms of COHs.

Three commenters were confused as to what particulate samplers could be used for monitoring air pollution episodes. It appears to the commenters that they would have to develop new methods. As stated above in the discussion of the changes to Appendix C, any method can be used for TSP episode monitoring if it provides real time data and a quantitative relationship to the Hi-vol can be established at the use site. Procedures for using a Hi-vol over short periods or staggered Hi-vols may also be used for episode monitoring.

Three commenters felt that it would be impractical to change the range of an analyzer when concentrations rose above the range limit being used and to change back to a lower range when concentrations fell. As explained above, analyzers may be used continually at higher ranges when the frequency of high concentrations justifies continual use.

Public Comments—Appendix D

The following discussion covers public comments received on the proposed Appendix D to Part 58.

One commenter was concerned with calling a CO station that measures maximum concentrations a middle scale station. Since these stations in many cases would represent midblock hotspot concentrations, which is the microscale, a microscale designation has been added to Appendix D.

One commenter suggested that an urban scale station for particulate matter was needed. In response, Appendix

D has been modified to indicate that the SLAMS network could contain an urban scale particulate matter station, but there is no requirement for an urban scale NAMS for particulate matter.

One commenter pointed out that while the total required number of TSP and SO_2 NAMS is given in Appendix D, no guidance is given as to how many stations should be in the maximum concentration category and how many should be in the population exposure category. The Appendix has been clarified to indicate that there should be at least one NAMS in each category for each pollutant (TSP and SO_2) but the remaining stations should be categorized based on the characteristics of the area.

One commenter pointed out that there could be difficulty in following the Appendix D instructions to minimize the impact of point sources on NAMS. EPA recognizes the difficulty in locating stations with respect to point source impact. However, EPA believes that the information contained in Appendix E and in the references cited in Appendix E is sufficient for locating stations which are not unduly influenced by any single source.

Two commenters questioned the fact that no NAMS were required for areas under 50,000 population even though there may be violations. As previously stated under the heading "General Discussion," the requirement establishing the number of NAMS necessary for certain areas is not to be considered the minimum number of stations required in the SLAMS network. The NAMS concept is meant to provide timely data from selected stations in the SLAMS network for purposes of national assessment. The national assessment needs will be met by data from areas over 50,000 population. The SLAMS network will also cover areas below 50,000, but none of those stations will be designated NAMS.

One commenter felt that more TSP and SO_2 stations are needed than are required by Appendix D. EPA feels the number of SO_2 and TSP NAMS that are required are sufficient for national data needs. EPA also believes that many more stations will be needed in the SLAMS network than the number required for NAMS. Data from all SLAMS will be considered in any important decision-making process.

One commenter suggested deactivating NAMS in selected areas for a year at a time on a rotational basis. This suggestion is contrary to one of the purposes of NAMS; namely, trends analysis. Also, the NAMS will be among hte more important stations in the SLAMS network which is further justification for maintaining NAMS in operation.

One commenter favored the use of laser spectroscopy methods to measure TSP over a wide area. As discussed previously, the TSP standard is based on measurements of particulate matter by the TSP reference method which is the Hi-vol sampler. Use of laser spectroscopy measurements considering the nature of the data produced. The method could, however, be used as SPM or for monitoring TSP episodes if a quantitative correlation to the Hi-vol can be established.

Two commenters felt that meteorological data should be collected at each NAMS. The collection of meteorological data at each NAMS is recommended but not required. At the present time EPA does not believe it would be cost effective to establish such a meteorological data network considering the resources that would be required.

One commenter felt that interstate and inter-regional cooperation is needed for network design. EPA agrees and is striving to attain this goal by having Regional Office involvement in SLAMS network design and by having EPA headquarters involvement in choosing NAMS sites.

Public Comments—Appendix E

The following discussion addresses the public comments received on the proposed Appendix E to Part 58.

One commenter felt that more spatial scales of representativeness were needed in order to classify all the stations in the SLAMS network. EPA agrees and has added more scales. These additional scales will allow more leeway in meeting the monitoring objectives of the SLAMS network.

One commenter requested clarification of the usage of the words "must" and "should" when applied to siting criteria. A statement has been added which stipulates that all "musts" indicate a requirement and all "shoulds" indicate criteria that do not have to be followed but which would be desirable to follow for the sake of consistency.

Eight commenters stated that the siting criteria are too restrictive and one commenter felt that waivers should be granted for some of the required siting criteria. Some of the siting criteria for CO, O_3, and NO_2 have been relaxed. Most of the siting criteria are tied to a specific monitoring scale and if the criteria are not met, the station location might represent a different scale. For those instances where it is impossible to meet a certain siting parameter, a waiver provision has been added. It is anticipated that waivers will primarily be used for existing sites and that stations in new locations will be able to meet the criteria.

Two commenters requested specifications for probe material and residence time of the air sample within the probe. A new section has been added containing probe material and residence time specifications. EPA agrees that these factors are as important as other criteria in terms of the effect on data quality and comparability.

One commenter suggested using the word "probe" instead of "monitor" when specifying siting criteria. This

change has been made for clarification in the portions of Appendix E applicable to gases. For TSP it is appropriate to speak in terms of monitor siting.

One commenter felt that the curve specifying setback distances from roads for TSP stations is too restrictive. The wording has been changed to indicate that the "acceptable zone" defined by the siting criteria is for stations designated as neighborhood, urban, regional, and for most middle scale stations. If a station is located closer to a roadway than specified in the criteria, it would represent a smaller geographical area and thus would most likely be classified as a middle scale station.

One commenter stated that the criterion specifying setback distances from roadways for TSP is ambiguous where it refers to "several thousand vehicles per day." The wording has been changed to read "approximately 3,000 vehicles per day."

One commenter noted a conflict in the criterion establishing distances from roadways for TSP and for CO. CO stations should be located near roadways because the roadway will most likely be the only source of CO. Neighborhood sites for TSP, however, are meant to represent a multisource situation and should be separated from roadways so that the air quality measurements are not totally dominated by the roadway.

One commenter felt that there should be no fixed minimum or maximum setbacks distances from roadways for CO. A table for neighborhood scale CO station setback distances from roadways based on average daily traffic has been added to Appendix E. This table, consisting of a range of minimum setback distances, will give more leeway for station siting and should result in data which are more comparable from location to location.

Three commenters stated that the minimum roadway setback distances for ozone are too restrictive and two

commenters expressed the same opinion about the NO_2 criteria. The roadway setback distances for O_3 and NO_2 have been revised according to new data available since proposal. The criteria are now less restrictive.

One commenter pointed out that for TSP and NO_2, stations cannot be located in areas of hi-rise buildings because of the criterion specifying distance to obstacle heights. Another commenter pointed out the same for SO_2 stations. The criterion alluded to is for neighborhood scale stations. If the criterion cannot be met because a station has to be located such that the distance to an obstacle is less than twice the height of that obstacle above the probe, the station would be classified as a middle scale station.

One commenter indicated that if a monitor probe is located on the side of a building that it will be impossible to meet the criterion of unrestricted air flow in three of four cardinal wind directions. Two other commenters noted that the criterion requiring SO_2 monitor probes to be located less than 80% of the mean height of the building on which the probe is located is in conflict with the 3-wind direction criteria. The language concerning air flow has been changed to read an arc of 270° instead of three to four wind directions. In addition, a statement has been added which stipulates that a monitor probe located on the side of a building must only have unobstructed air flow for 180°. Also, the criteria concerning 80% of mean building height has been deleted since it is redundant. The situation is covered by other SO_2 citing criteria in Appendix E which limits probe height to between 3 and 15 meters.

One commenter indicated that if TSP stations are not allowed to be located in unpaved areas unless there is a vegetative ground cover, large areas around some stations will have to be paved. The criterion concerning unpaved areas is in terms of "should" and not "must".

The criterion, therefore, does not have to be strictly followed.

One commenter felt that the criterion establishing minimum distances of O_3 stations from trees cannot be met. The criterion concerning separation of O_3 stations and trees has been put in terms of "should" instead of "must".

Two commenters indicated that the criteria limiting CO monitor probes to 3 meters ± ½ meter above ground is not practical and would require vandal-proof enclosures. EPA understands the concerns of these two commenters; however, the height restrictions are the best compromise that can be made between seeking to be vandal-proof and still representing the breathing zone. It has been determined that there is a significant vertical gradient for CO concentrations in the intercity, street canyon environment. For the neighborhood scale station which is more removed from traffic, the height restriction is not as critical since vertical concentration gradients are not as commenter suggested, the criteria has been changed to allow monitor probes to be located 3 to 15 meters above ground for neighborhood scale stations.

Public Comments—Appendix F

The following discussion pertains to public momments received on the proposed Appendix F of Part 58.

One commenter pointed out that gaseous pollutants as measured on continuous analyzers are in units of parts per million (ppm) and should be reported that way in the annual SLAMS report. EPA agrees and has made appropriate changes to the data reporting requirements.

One commenter requested that EPA address the inconsistency between the use of discrete versus running averages in comparing standards for CO and SO_2. The an-

nual reporting requirements have been modified by requiring that for both CO and SO_2 the highest and second highest nonoverlapping eight-hour and 24-hour averages, respectively, be reported. These requirements are consistent with the EPA guidance in interpretating air quality data with respect to the standards (OAQPS Guideline No. 1.2-008). Both the SO_2 and CO standards will be reviewed in 1979 and 1980, when a decision on the need to revise the standards will be made. This could change the reporting requirements for these pollutants.

One commenter questioned who would sign the annual SLAMS summary report if some of the data were provided by local agencies of the State. The regulation, § 58.26, has been revised to indicate that the senior air pollution control officer in the State or his designee will certify the accuracy of the report. The certification statement should indicate that the data were collected under regulations that were applicable during the monitoring period. Even though a local agency collects data, the State is still responsible for assuring that the data are collected according to the criteria established in Part 58. If the State is assured of correct data collection, there should be no problem with the report being certified at the State level.

One commenter requested that precision and accuracy information be included in the annual SLAMS summary report. EPA agrees and such a requirement has been added to the regulations.

One commenter felt that the monitoring operation schedule should be included in the annual report. EPA feels that such a requirement would be too burdensome to justify. Inclusion of the monitoring operating schedule in the annual report, however, is encouraged if States have the time and resources and wish to do so.

Public Comments—Appendix G

The following discussion concerns the public comments received on the proposed Appendix G to Part 58.

Nine commenters requested that the descriptor words used to identify air quality conditions for the various ranges of daily air pollution index values be changed. Because the index is for the purpose of achieving national uniformity of daily air quality reports as required by § 319 of the Act, the use of descriptor words other than those proposed is not permitted unless approved by the EPA Administrator. None of the suggested descriptor words appears superior to those proposed.

Two commenters indicated that the breakpoints separating the air quality index ranges should correspond to levels of State air quality standards and air pollution episodes instead of national standards, national significant harm levels, and EPA suggested episode levels. In order to achieve national uniformity, federal standards, suggested episode levels, and significant harm levels must be used. Index values of 200, 300 and 400 for the most part correspond to the federal alert, warning, and emergency episode levels given in Appendix L to Part 51. However, because many factors, including meteorological conditions, are taken into account before triggering episode control actions, reported index values and the calling of an episode do not always correspond. Variable breakpoints from State to State would not satisfy the § 319 requirements for a uniform index.

The index has been modified to reflect the new ozone NAAQS of 0.12 p.p.m. (235 $\mu g/m^3$) which was promulgated in the *Federal Register* on February 8, 1979 (44 FR 8202). The index value of 100 for ozone corresponds to this new level of the standard. The new standard replaces the previous photochemical exidant standard level of 0.08 p.p.m. (160 $\mu g/m^3$).

Two commenters disagreed with the proposed procedure of reporting only the index of the pollutant of highest concentration (subindex). They felt that an index based on the reporting of the maximum subindex value would be insufficient and would mask the significance of other pollutants and their impact on health and environmental quality. The Appendix G requirements do not prevent a State from reporting subindices for other pollutants. Appendix G suggests that a State should report the other subindices, but it is left to the State's discretion whether it will be done.

Three commenters suggested basing the TSP subindex on COHs. As stated previously under the discussion of Appendix C, a tape sampler may be used for episode or daily index purposes if a site specific quantitative relationship to the Hi-vol is established.

Two commenters requested that the breakpoint between the good range and the moderate range for TSP and O_3 be raised to account for higher levels which are due to naturally occuring backgorund levels of the two pollutants. EPA disagrees that the breakpoints should be changed. Air quality is good or bad because of ambient concentrations regardless of the source or cause of the concentrations. Language has been added to Appendix G, however, which recommends reporting information and causes for unusually high concentrations.

One commenter was concerned that index values would be used to compare air quality in different areas. EPA does not encourage the use of index values for air quality comparisons from area to area. The index is for the purpose of giving citizens in a specific area an idea of the quality of air they will encounter on a daily basis.

Two commenters stated that EPA should public health effects criteria before promulgating Appendix G. Spe-

cifically, concentrations of SO_2 defined as "significant harm" should be supported by published health effects research data. The EPA Office of Public Affairs has prepared for the public a brochure which discusses the Pollutant Standards Index (PSI) and presents pollutant specific health effects. The brochure (Measuring Air Quality—The New Pollutant Standards Index, July, 1978, OPA, 11/8) is available from the Environmental Protection Agency, Library (MD-35), Research Triangle Park, N.C. 27711. Health effects associated with the significant harm level for SO_2 can be found in "Air Quality Criteria for Sulfur Oxides," U.S. Department of Health, Education, and Welfare, Washington, D.C., AP-50, April 1970. The information in the criteria document will be re-examined by EPA when the SO_2 NAAQS are reviewed during 1979 and 1980. After review of the latest data on health effects and the criteria document, a decision will be made as to the need to revise the SO_2 standards.

One commenter did not think that real-time data will be available for determining a daily index. EPA disagrees and feels that data can be made available at times when it is needed for index calculation.

One commenter felt that public acceptance of the index is doubtful. Since the PSI, which is the basis for the Appendix G index, was published, it has been generally well accepted throughout the country and has been adopted by 15 State agencies and is reported by State or local agencies in 24 States.

One commenter stated that the index is not applicable to a large metropolitan area, such as the Los Angeles Basin. Appendix G recommends that the index be reported for multiple sub-regions within a metropolitan area and should at a minimum include the region with the highest subindex.

One commenter indicated that implementation of this index would create serious administrative problems, es-

pecially the proposed recording of index values. The reporting requirements in Appendix G are minimal, requiring that the reporting agency keep annual records of the frequency with which reported index values occur in each of the index descriptor categories.

Two commenters requested that the index be reported on weekends and holidays as well as weekdays. The requirement to report the index only at least five days per week, presummable the normal workweek, does not restrict an agency from reporting every day. If an agency has the resources to do so. EPA encourages index reporting every day.

Two commenters felt that the index breakpoint of 100 for the NO_2 subindex and the subindex for the product of TSP and SO_2 should be based on State short-term standards or their equivalent because there are no short-term standards for NO_2 and the product of SO_2 and TSP. EPS is presently considering a short-term NO_2 standard. (For the other pollutants the breakpoint of 100 is based on short-term NAAQS.) The exemption provision in Appendix G allows a State or local agency to petition the Administrator and request such a modification to the index.

Review of Public Comments

Copies of the public comments received on the proposal of these regulations on August 7, 1978, are available for public inspection during normal business hours at the Public Information Reference Unit, 401 M Street, S.W., Washington, D.C. 20460.

Effective date: These regulations promulgated herein take effect on June 11, 1979.

Dated: April 27, 1979.

Douglas M. Costle,

Administrator.

PART 51—REGULATIONS FOR AMBIENT AIR QUALITY MONITORING AND DATA REPORTING

Part 51 of Title 40, *Code of Federal Regulations*, is amended as follows:

1. The table of contents to this part is amended by adding, Subpart J and Subpart O in the appropriate places, the following:

* * * * *

Subpart J—Ambient Air Quality Surveillance

§ 51.190 Ambient air quality monitoring requirements.

* * * * *

Subpart O—Miscellaneous Plan Content Requirements

§ 51.285 Public notification.

* * * * *

Subpart Q—Reports

Air Quality Data Reporting

§ 51.320 Annual air quality data report.

Source Emissions and State Action Reporting

§ 51.321 Annual source emissions and State action report.

§ 51.322 Sources subject to emissions reporting.
§ 51.323 Reportable emissions data and information.
§ 51.324 Progress in plan enforcement.
§ 51.325 Contingency plan actions.
§ 51.326 Reportable revisions.
§ 51.327 Enforcement orders and other State actions.
§ 51.328 Plan prescribed actions.

* * * * *

2. Section 51.3 is amended by revising the second sentence in paragraph (c) to remove the reference to § 51.17. As amended, § 51.3(c) reads as follows:

§ 51.3 Classification of regions.

* * * * *

(c) * * * The requirements applicable to Priority IA Regions shall be the same as those for other Priority I regions, except that the requirements applicable to Priority II regions under § 51.16 shall apply. * * *

3. Section 51.6 is amended by revising paragraph (e) to remove the reference to the § 51.7 semiannual report and adding a reference to the annual report required by § 51.321. As amended, § 51.6(e) reads as follows:

§ 51.6 Revisions.

* * * * *

(e) Revisions other than those covered by paragraphs (a) and (d) of this section must be identified and described in the next annual report required by § 51.321.

* * * * *

§ 51.7 and 51.17 [Reserved]

4. Sections 51.7 and 51.17 are revoked and reserved.

5. Section 51.13 is amended by revising the second sentence of paragraph (g) to read as follows:

§ 51.13 Control strategy: Sulfur oxides and particulate matter.

* * * * *

(g) * * * Actual meansurements must be used where available if based on use of the measurement methods specified in Appendix C to Part 58 of this chapter. * * *

§ 51.15 [Amended]

6. Section 51.15 is amended by revoking paragraph (a)(2).

7. Section 51.16 is amended by removing the two references to "COHs" in paragraph (a). As amended, § 51.16(a) reads as follows:

§ 51.16 Prevention of air pollution emergency episodes.

(a) * * *

Particulate matter—1,000 micrograms/cubic meter; 24-hour average.

Sulfur dioxide and particulate matter combined—product of sulfur dioxide in micrograms/cubic meter, 24-hour average, and particulate matter in micrograms/cubic meter, 24-hour average, equal to $490X10^3$.

* * * * *

§ 51.17a [Revoked]

8. Section 51.17a is revoked.

9. Section 51.24 is amended by adding paragraph (n) (3) to read as follows:

§ 51.24 Prevention of significant deterioration of air quality.

* * * * *

(n) * * *

(3) The owner or operator shall meet the requirements of Appendix B to Part 58 of this chapter during the operation of monitoring stations required by paragraph (n) (1) of this section as follows:

(i) No later than January 1, 1980, for existing stations, or

(ii) For new stations, at the time the station is put into operation.

§ 51.59 [Reserved]

10. Section 51.59 is revoked and reserved.

11. Subpart J consisting of § 51.190 is added to read as follows:

Subpart J—Ambient Air Quality Surveillance

§ 51.190 Ambient air quality monitoring requirements.

The requirements for monitoring ambient air quality for purposes of the plan are located in Subpart C of Part 58 of this chapter.

12. Subpart O consisting of § 51.285 is added to read as follows:

Subpart O—Miscellaneous Plan Content Requirements

§ 51.285 Public notification.

By March 1, 1980, the State shall submit a plan revision that contains provisions for:

(a) Notifying the public on a regular basis of instances or areas in which any primary standard was exceeded during any portion of the proceeding calendar year.

(b) Advising the public of the health hazards associated with such an exceedance of a primary standard, and

(c) Increasing public awareness of:

(1) measures which can be taken to prevent a primary standard from being exceeded, and

(2) ways in which the public can participate in regulatory and other efforts to improve air quality.

13. Subpart Q is added to read as follows:

Subpart Q—Reports

Air Quality Data Reporting

§ 51.320 Annual air quality data report.

The requirements for reporting air quality data collected for purposes of the plan are located in Subpart C of Part 58 of this chapter.

Source Emissions and State Action Reporting

§ 51.321 Annual source emissions and State action report.

On an annual (calendar year) basis beginning with calendar year 1979, the State agency shall report to the Administrator (through the appropriate Regional Office) information as specified in Sections 51.323 through 51.326. Reports must be submitted by July 1 of each year for data collected and actions which took place during the period January 1 to December 31 of the previous year.

§ 51.322 Sources subject to emissions reporting.

(a) Point sources subject to the annual emissions reporting requirements of § 51.321 are defined as follows:

(1) For particulate matter, sulfur dioxide, hydrocarbons, and nitrogen dioxide, any facility that actually emits a total of 90.7 metric tons (100 tons) per year or more of any one pollutant.

(2) For carbon monoxide, any facility that actually emits a total of 907 metric tons (1000 tons) per year or more.

(3) For lead or lead compounds measured as elemental lead, any facility that actually emits a total of 4.5 metric tons (5 tons) per year or more.

(b) Annual emissions reporting requirements apply only to emissions of each pollutant from any individual emission point within the facility that emits:

(1) For particulate matter, sulfur dioxide, hydrocarbons, and nitrogen dioxide, 22.7 metric tons (25 tons) per year or more.

(2) For carbon monoxide, 227 metric tons (250 tons) per year or more.

(3) For lead or lead compounds measured as elemental lead, 4.5 metric tons (5 tons) per year or more.

§ 51.323 Reportable emissions data and information.

(a) The State shall submit in the annual report the following emissions data and information:

(1) Emissions of particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, and hydrocarbons as specified by AEROS Users Manual, Vol. II (EPA 450/2-76-029, OAQPS No. 1.2-039) to be coded into the National Emission Data System (NEDS) points source coding forms, and

(2) Emissions of lead or lead compounds measured as elemental lead as specified by AEROS Users Manual, Vol. II (EPA 450/2-76-029, OAQPS No. 1.2-039) to be coded into the Hazardous and Trace Emissions System (HATREMS) points source coding forms.

(b) Such emissions data and information specified in paragraph (a) of this section must be submitted on either paper forms, punched cards, or magnetic tape in the format of the NEDS point source coding forms or the HATREMS point source coding forms as appropriate.

(c) The emissions data and information specified by paragraph (a) of this section must be submitted in the annual report for any point source for which one or more of the following conditions occurs:

(1) A source achieves compliance at any time within the reporting period with any regulation of an applicable plan,

(2) A new or modified source receives approval to construct during the reporting period or begins operating during the reporting period,

(3) A source ceases operations during the reporting period, or

(4) A source's emissions have changed more than 5% from the most recently submitted emissions data.

(d) If, as determined by the State and the Regional Administrator, the emissions from any point source have not changed more than 5% from the most recently submitted emissions data, the State shall update the year of record of the previously reported data and information specified by paragraph (a) of this section.

§ 51.324 Progress in plan enforcement.

(a) For each point source, the State shall report any achievement made during the reporting period of any increment of progress of compliance schedules required by:

(1) The applicable plan, or

(2) Any enforcement order or other State action required to be submitted pursuant to Section 51.327.

(b) For each point source, the State shall report any enforcement action taken during the reporting period and not submitted under Section 51.327 which results in civil or criminal penalties.

§ 51.325 Contingency plan actions.

The State shall report any measures taken during the reporting period, and an evaluation of their effectiveness, such as those actions specified in the contingency plan required by § 51.16, to stop emissions of air pollutants causing or contributing to any incident of air pollution which corresponds to a stage of episode criteria as established in the contingency plan. The State shall also report an account of any episode stage, as established in the contingency plan, during which no action was taken by the State or local air pollution control agency and an explanation for the failure to take such action.

§ 51.326 Reportable revisions.

The State shall identify and describe all substantive plan revisions during the reporting period of the applicable plan other than revisions to rules and regula-

tions or compliance schedules submitted in accordance with § 51.6(d). Substantive revisions shall include but are not limited to changes in stack-test procedures for determining compliance with applicable regulations, modifications in the projected total manpower needs to carry out the approved plan, and all changes in responsibilities given to local agencies to carry out various portions of the plan.

§ 51.327 Enforcement orders and other State actions.

(a) Any State enforcement order, including any State court order, must be submitted to the Administrator within 60 days of its issuance or adoption by the State.

(b) A State enforcement order or other State action must be submitted as a revision to the applicable implementation plan pursuant to § 51.6 and approved by the Administrator in order to be considered a revision to such plan.

§ 51.328 Plan prescribed actions.

(a) The State shall report on the status and progress of the following actions if the plan prescribed such action:

(1) Obtaining additional resources.

(2) Adopting new laws or regulations.

(3) Conducting studies to provide a basis for further actions directed toward the attainment and maintenance of national standards.

(4) initiating new programs or expanding existing programs for the attainment and maintenance of national standards.

(b) The State shall make the report required under paragraph (a) of this section with the annual report as described in § 51.321, commencing with the first annual reporting period following submission of the plan pro-

vision that prescribes such action and ending with the completion of the action on which the State must report.

(c) The Administrator will identify those matters on which the State must report.

Subparts F - I, K - N and P [Reserved]

14. Subparts F through I, K through N, and P are reserved.

15. Appendix L is amended by removing references to "COHs" in paragraphs 1.1(b), 1.1(c), and 1.1(d). As amended, Appendix L reads as follows:

Appendix L—Example Regulations for Prevention of Air Pollution Emergency Episodes

* * * * *

1.1 Episode criteria. * * *

(b) "Alert": * * *

Particulate—375 $\mu g/m^3$, 24-hour average.

SO_2 and particulate combined—product of $SO_2 \mu g/m^3$, 24-hour average and particulate $\mu g/m^3$, 24-hour average equal to 65×10^3.

* * * * *

(c) "Warning": * * *

Particulate—625 $\mu g/m^3$, 24-hour average.

SO_2 and particulate combined—product of $SO_2 \mu g/m^3$, 24-hour average and particulate AG2$\mu g/m^3$, 24-hour average equal to 261×10^3.

* * * * *

(d) "Emergency": * * *

Particulate—875 $\mu g/m^3$, 24-hour average.

SO_2 and particulate combined—product of $SO_2 \mu g/m^3$, 24-hour average and particulate $\mu g/m^3$, 24-hour average equal to 393×10^3.

* * * * *

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

Part 52 of Title 40, *Code of Federal Regulations*, is amended as follows:

1. Section 52.21 is amended by adding paragraph (n) (3) to read as follows:

§ 52.21 Prevention of significant deterioration of air quality.

* * * * *

(n) * * *

(3) The owner or operator shall meet the requirements of Appendix B to Part 58 of this chapter during the operation of monitoring stations required by paragraph (n) (1) of this section as follows:

(i) No later than January 1, 1980, for existing stations, or

(ii) For new stations, at the time the station is put into operation.

2. The following sections are amended by removing the reference "§ 51.7" and replacing it with the reference "§ 58.35."

§ 52.93 (b), second sentence.
§ 52.93 (c), second sentence.
§ 52.140 (b), second sentence.
§ 52.140 (c), second sentence.
§ 52.266 (d), first sentence.
§ 52.479 (c) (2), second sentence.
§ 52.479 (c) (3), second sentence.
§ 52.734 (b), second sentence.
§ 52.734 (c), third sentence.
§ 52.1077 (c) (2), second sentence.
§ 52.1077 (c) (3), second sentence.
§ 52.1155 (f), first sentence.

§ 52.1593(d), first sentence.
§ 52.2053(b), second sentence.
§ 52.2053(c), third sentence.
§ 52.2298(c), first sentence.
§ 52.2343(b), second sentence.
§ 52.2343(c), second sentence.
§ 52.2427(d)(2), second sentence.
§ 52.2427(d)(3), second sentence.
§ 52.2477(c)(2), second sentence.
§ 52.2477(c)(3), second sentence.

§§ 52.779, 52.2029, 52.2482 [Reserved]

3. Sections 52.779, 52.2029, and 52.2482 are revoked and reserved.

4. Section 52.1160 is amended by revising the last sentence in paragraph (l). As amended, 52.1160 reads as follows:

§ 52.1160 Monitoring reports.

* * * * *

(1) * * * In addition, all air quality data collected at SLAMS will be summarized as an annual summary report to the Administrator as required by § 58.26 of this chapter.

* * * * *

5. Section 52.1175 is amended by revising paragraph (a) to read as follows:

§ 52.1175 Compliance schedules.

(a) The requirements of § 51.15(a)(2) of this chapter as of May 31, 1972, (36 FR 22398) are not met since Rule 336.49 of the Michigan Air Pollution Control Commission provides for individual compliance schedules to be submitted to the State Agency by January 1, 1974. This would not be in time for submittal to the Environmental Protection Agency with the first semiannual report.

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PART 53—AMIBENT AIR MONITORING REFERENCE AND EQUIVALENT METHODS

Part 53 Title 40, *Code of Federal Regulations,* is amended as follows:

§ 53.16 [Amended]

Section 53.16 amended by removing the citation "§ 51.17a(a)(4)" from the third sentence of paragraph (e)(1) and from subdivision (iv) of the first sentence in paragraph (e)(2) and replacing the citations with "section 2.3 of Appendix C to Part 58 of this chapter."

Title 40, *Code of Federal Regulations,* is amended by adding a new Part 58 to read as follows:

PART 58—AMBIENT AIR QUALITY SURVEILLANCE

Subpart A—General Provisions

Sec.

58.1 Definitions.
58.2 Purpose.
58.3 Applicability.

Subpart B—Monitoring Criteria

58.10 Quality assurance.
58.11 Monitoring methods.
58.12 Siting of instruments or instrument probes.
58.13 Operating schedule.
58.14 Special purpose monitors.

Subpart C—State and Local Air Monitoring Stations (SLAMS)

58.20 Air quality surveillance: Plan content.
58.21 SLAMS network design.
58.22 SLAMS methodology.

58.23 Monitoring network completion.
58.24 [Reserved].
58.25 System modification.
58.26 Annual SLAMS summary report.
58.27 Compliance date for air quality data reporting.
58.28 Regional Office SLAMS data acquisition.

Subpart D—National Air Monitoring Stations (NAMS)

58.30 NAMS network establishment.
58.31 NAMS network description.
58.32 NAMS approval.
58.33 NAMS methodology.
58.34 NAMS network completion.
58.35 NAMS data submittal.

Subpart E—Air Quality Index Reporting

58.40 Index reporting.

Subpart F—Federal Monitoring

58.50 Federal monitoring.
58.51 Monitoring other pollutants.

Appendix A—Quality Assurance

Requirements for State and Local Air Monitoring Stations (SLAMS).

Appendix B—Quality Assurance

Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring.

Appendix C—Ambient Air Quality
Monitoring Methodology.

Appendix D—Network Design for State and Local Air Monitoring Stations (SLAMS) and National Air Monitoring Stations (NAMS).

Appendix E—Probe Sitting Criteria for Ambient Air Quality Monitoring.

Appendix F—Annual SLAMS Air Quality Information.

Appendix G—Uniform Air Quality Index and Daily Reporting.

Authority: The provisions of this Part 58 are issued under sections 110, 301(a), 313, and 319 of the Clean Air Act (42 U.S.C. 7410, 7601(a), 7613, 7619).

Subpart A—General Provisions

§ 58.1 Definitions.

As used in this part, all terms not defined herein have the meaning given them in the Act:

(a) "Act" means the Clean Air Act as amended (42 U.S.C. 7401, et seq.).

(b) "SLAMS" means State or Local Air Monitoring Station(s). The SLAMS make up the ambient air quality monitoring network which is required by § 58.20 to be provided for in the State's implementation plan. This definition places no restrictions on the use of the physical structure or facility housing the SLAMS. Any combination of SLAMS and any other monitors (Special Purpose, NAMS, PSD) may occupy the same facility or structure without affecting the respective definitions of those monitoring station.

(c) "NAMS" means National Air Monitoring Station(s). Collectively the NAMS are a subset of the SLAMS ambient air quality monitoring network.

(d) "PSD station" means any station operated for the purpose of establishing the effect on air quality of the emissions from a proposed source for purposes of prevention of significant deterioration as required by § 51.24 (n) of Part 51 of this chapter.

(e) "SO_2" means sulfur dioxide.

(f) "NO_2" means nitrogen dioxide.

(g) "CO" means carbon monoxide.

(h) "O_3" means ozone.

(i) "Plan" means an implementation plan, approved or promulgated pursuant to section 110 of the Clean Air Act.

(j) "Administrator" means the Administrator of the Environmental Protection Agency (EPA) or his or her authorized representative.

(k) "Regional Administrator" means the Administrator of one of the ten EPA Regional Offices or his or her authorized representative.

(l) "State agency" means the air pollution control agency primarily responsible for development and implementation of a plan under the Act.

(m) "Local agency" means any local government agency , other than the State agency, which is charged with the responsibility for carrying out a portion of the plan.

(n) "Indian Reservation" means any Federally recognized reservation established by treaty, agreement, executive order, or act of Congress.

(o) "Indian Governing Body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(p) "Storage and Retrieval of Aerometric Data (SAROAD) system "is a computerized system which stores and reports information relating to ambient air quality.

(q) "SOROAD site identification form" is one of the several forms in the SAROAD system. It is the form

which provides a complete description of the site (and its surroundings) of an ambient air quality monitoring station.

§ 58.2 Purpose.

(a) This part contains criteria and requirements for ambient air quality monitoring and requirements for reporting ambient air quality data and information. The monitoring criteria pertain to the following areas:

(1) Quality assurance procedures for monitor operation and data handling.

(2) Methodology used in monitoring stations.

(3) Operating schedule.

(4) Siting parameters for instruments or instrument probes .

(b) The requirements pertaining to provisions for an air quality surveillance system in the State Implementation Plan are contained in this part.

(c) This part also acts to establish a national ambient air quality monitoring network for the purpose of providing timely air quality data upon which to base national assessments and policy decisions. This network will be operated by the States and will consist of certain selected stations from the States' SLAMS networks. These selected stations will remain as SLAMS and will continue to meet any applicable requirements on SLAMS. The stations, however, will also be designated as National Air Monitoring Stations (NAMS) and will be subject to additional data reporting and monitoring methodology requirements as contained in Subpart D of this part.

(d) Requirements for the daily reporting of an index of ambient air quality, to insure that the population of

major urban areas are informed daily of local air quality conditions, are also included in this part.

§ 58.3 Applicability.

This part applies to:

(a) State air pollution control agencies.

(b) And local air pollution control agency or Indian governing body to which the State has delegated authority to operate a portion of the State's SLAMS network.

(c) Owners or operators of proposed sources.

Subpart B—Monitoring Criteria

§ 58.10 Quality assurance.

(a) Appendix A to this part contains quality assurance criteria to be followed when operating the SLAMS network.

(b) Appendix B to this part contains the quality assurance criteria to be followed by the owner or operator of a proposed source when operating a PSD station.

§ 58.11 Monitoring methods.

Appendix C to this part contains the criteria to be followed in determining acceptable monitoring methods or instruments for use in SLAMS.

§ 58.12 Siting of instruments or instrument probes.

Appendix E to this part contains criteria for siting instruments or instrument probes for SLAMS.

§ 58.13 Operating schedule.

Ambient air quality data collected at any SLAMS must be collected as follows:

(a) For continuous analyzers—consecutive hourly averages except during:

(1) Periods of routine maintenance,

(2) Periods of instrument calibration, or

(3) periods or seasons exempted by the Regional Administrator.

(b) For manual methods—at least one 24-hour sample every six days except during periods or seasons exempted by the Regional Administrator.

§ 58.14 Special purpose monitors.

Any ambient air quality monitoring station other than a SLAMS or PSD station from which the State intends to use the data as part of a control strategy demonstration or as support for a plan revision must meet the requirements for SLAMS described in § 58.22 and, after January 1, 1983, meet the requirements for SLAMS described in § 58.13 and Appendices A and E to this part.

Subpart C—State and Local Air Monitoring Stations (SLAMS)

§ 58.20 Air quality surveillance: Plan content.

By January 1, 1980, the State shall adopt and submit to the Administrator a revision of the plan which will:

(a) Provide for the establishment of an air quality surveillance system that consists of a network of monitoring stations designated as State and Local Air Monitoring Stations (SLAMS) which measure ambient concentrations of those pollutants for which standards have been established in Part 50 of this chapter.

(b) Provide for meeting the requirements of Appendices A, C, D, and E to this part.

(c) Provide for the operation of at least one SLAMS per pollutant during any stage of an air pollution episode as defined in the contingency plan.

(d) Provide for the review of the air quality surveillance system on an annual basis to determine if the system meets the monitoring objectives defined in Appendix D to this part. Such review must identify needed modifications to the network such as termination or relocation of unnecessary stations or establishment of new stations which are necessary.

(e) Provide for having a SLAMS network description available for public inspection and submission to the Administrator upon request. The network description must be available at the time of plan revision submittal and must contain the following information for each SLAMS:

(1) The SOROAD site identification form for existing stations.

(2) The proposed location for scheduled stations.

(3) The sampling and analysis method.

(4) The operating schedule.

(5) The monitoring objective and spatial scale of representativeness as defined in Appendix D to this part.

(6) A schedule for;

(i) locating, placing into operation, and making available the SAROAD site identification form for each SLAMS which is not located and operating at the time of plan revision submittal,

(ii) implementing quality assurance procedures of Appendix A to this part for each SLAMS for which such procedures are not implemented at the time of plan revision submittal, and

(iii) resiting each SLAMS which does not meet the requirements of Appendix E to this part at the time of plan revision submittal.

§ 58.21 SLAMS network design.

The design criteria for SLAMS contained in Appendix D to this part must be used in designing the SLAMS network. The State shall consult with the Regional Administrator during the network design process. The final network design will be subject to the approval of the Regional Administrator.

§ 58.22 SLAMS methodology.

Each SLAMS must meet the monitoring methodology requirements of Appendix C to this part at the time the station is put into operation as a SLAMS.

§ 58.23. Monitoring network completion.

By January 1, 1983:

(a) Each station in the SLAMS network must be in operation, be sited in accordance with the criteria in Appendix E to this part, and be located as described on the station's SAROAD site identification form, and

(b) The quality assaurance requirements of Appendix A to this part must be fully implemented.

§ 58.24 [Reserved].

§ 58.25 System modification.

The State shall annually develop and implement a schedule to modify the ambient air quality monitoring network to eliminate any unnecessary stations or to correct any inadequacies indicated by the result of the annual review required by § 58.20(d). The State shall consult with the Regional Administrator during the development of the schedule to modify the monitoring program. The final schedule and modifications will be subject to the approval of the Regional Administrator. Nothing in this section will preclude the State, with the approval of the Regional Administrator, from making modifications to the SLAMS network for reasons other than those resulting from the annual review.

§ 58.26 Annual SLAMS summary report.

(a) The State shall submit to the Administrator (through the appropriate Regional Office) an annual summary report of all the ambient air quality monitoring data from all monitoring stations designated State and Local Air Monitoring Stations (SLAMS). The annual report must be submitted by July 1 of each year for data collected from January 1 to December 31 of the previous year.

(b) The annual summary report must contain:

(1) The information specified in Appendix F,

(2) The annual precision and accuracy information described in Section 5.2 of Appendix A, and

(3) The location, date, pollution source, and duration of each incident of air pollution during which ambient levels of pollutants reached or exceeded the level specified by § 51.16(a) of this chapter as a level which could cause significant harm to the health of persons.

(c) The senior air pollution control officer of the State or his designee shall certify that the annual summary report is accurate to the best of his knowledge.

§ 58.27 Compliance data for air quality data reporting.

The annual air quality data reporting requirements of § 58.26 apply to data collected after December 31, 1980. Data collected before January 1, 1981, must be reported under the reporting procedures in effect before the effective date of Subpart C of this part.

§ 58.28 Regional Office SLAMS data acquisition.

The State shall submit all or a portion of the SLAMS data to the Regional Administrator upon his request.

Subpart D—National Air Monitoring Stations (NAMS)

§ 58.30 NAMS network establishment.

(a) By January 1, 1980, the State shall:

(1) Establish, through the operation of stations or through a schedule for locating and placing stations into operation, that portion of a National Ambient Air Quality Monitoring Network which is in that State, and

(2) Submit to the Administrator (through the appopriate Regional Office) a description of that State's portion of the network.

(b) Hereinafter, the portion of the national network in any State will be referred to as the NAMS network.
(c) The stations in the NAMS network must be stations from the SLAMS network required by § 58.20.

(d) The requirements of Appendix D to this part must be met when designing the NAMS network. The process of designing the NAMS network must be part of the process of designing the SLAMS network as explained in Appendix D to this part.

§ 58.31 NAMS network description.

The NAMS network description required by § 58.30 must contain the following from all stations, existing or scheduled:

(a) The SAROAD site identification form for existing stations.

(b) The proposal location for scheduled stations.
(c) Identity of the urban area represented.

(d) The sampling and analysis method.

(e) The operating schedule.

(f) The monitoring objective and spatial scale of representativeness as defined in Appendix D to this part.

(g) A schedule for:

(1) Locating, placing into operation, and submitting the SAROAD site identification form for each NAMS

which is not located and operating at the time of network description submittal,

(2) Implementing quality assurance procedures of Appendix A to this part for each NAMS for which such procedures are not implemented at the time of network description submittal, and

(3) Resiting each NAMS which does not meet the requirements of Appendix E to this part at the time of network description submittal.

§ 58.32 NAMS approval.

The NAMS network required by § 58.30 is subject to the approval of the Administrator. Such approval will be contingent upon completion of the network description as outlined in § 58.31 and upon conformance to the NAMS design criteria contained in Appendix D to this part.

§ 53.33 NAMS methodology.

Each NAMS must meet the monitoring methodology requirements of Appendix C to this part applicable to NAMS at the time the station is put into operation as a NAMS.

§ 58.34 NAMS network completion.

By January 1, 1981:

(a) Each NAMS must be in operation, be sited in accordance with the criteria in Appendix E to this part, and be located as described in the station's SAROAD site identification form; and

(b) The quality assurance requirements of Appendix A to this part must be fully implemented for all NAMS.

§ 58.35 NAMS data submittal.

(a) The requirements of this section apply only to those stations designated as NAMS by the network description required by § 58.30.

(b) The State shall report quarterly to the Administrator (through the appropriate Regional Office) all ambient air quality data and information specified by AEROS Users Manual (EPA-450/2-76-029, OAQPS No. 1.2-039) to be coded into the SAROAD Air Quality Data forms. Such air quality data and information must be submitted on either paper forms, punched cards, or magnetic tape in the format of the SAROAD Air Quality Data forms.

(c) The quarterly reporting periods are January 1-March 31, April 1-June 30, July 1-September 30, and October 1-December 31. The quarterly report must:

(1) Be submitted within 90 days of the end of each reporting period, and

(2) Contain all data and information gathered during the reporting period.

(d) The first quarterly report will be due on or before June 30, 1981, for data collected during the first quarter of 1981.

(e) Air quality data submitted in the quarterly report must have been edited and validated so that such data are ready to be entered into the SAROAD data files. Procedures for editing and validating data are described in AEROS Users Manual (EPA-450/2-76-029, OAQPS No. 1.2-039).

(f) This section does not permit a State to exempt those SLAMS which are also designed as NAMS from all or any of the reporting requirements applicable to SLAMS in § 58.26.

Subpart E—Air Quality Index Reporting

§ 58.40 Index reporting.

(a) The State shall report to the general public on a daily basis through prominent notice an air quality

index in accordance with the requirements of Appendix G to this part.

(b) Reporting must commence by January 1, 1981, for all urban areas with a population exceeding 500,000, and by January 1. 1983, for all urban areas with a population exceeding 200,000.

(c) The population of urban areas for purposes of index reporting are as defined in "1970 Census of Population; Supplementary Report: Population of Urbanized Areas Established Since the 1970 Census, for the United States; 1970," U.S. Bureau of Census, PC(S)-106, U.S. Government Printing Office, Washington, D.C., October, 1976.

Subpart F—Federal Monitoring

§ 58.50 Federal monitoring.

The Administrator may locate and operate an ambient air monitoring station if the State fails to locate, or schedule to be located, during the initial network design process or as a result of the annual review required by § 58.20(d):

(a) A SLAMS at a site which is necessary in the judgment of the Regional Administrator to meet the objectives defined in Appendix D to this part, or

(b) A NAMS at a site which is necessary in the judgment of the Administrator for meeting EPA national data needs.

§ 58.51 Monitoring other pollutants.

The Administrator may promulgate criteria similar to that referenced in Subpart B of this part for monitoring a pollutant for which a National Ambient Air Quality Standard does not exist. Such an action would be taken whenever the Administrator determines that

a nationwide monitoring program is necessary to monitor such a pollutant.

Appendix A. Quality Assurance Requirements For State and Local Air Monitoring Stations (SLAMS)

[Text Omitted]

Appendix B. Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring

[Text Omitted]

Appendix C—Ambient Air Quality Monitoring Methodology

[Text Omitted]

APPENDIX D—NETWORK DESIGN FOR STATE AND LOCAL AIR MONITORING STATIONS (SLAMS) AND NATIONAL AIR MONITORING STATIONS (NAMS)

1. SLAMS MONITORING OBJECTIVES AND SPATIAL SCALES

2. SLAMS NETWORK DESIGN PROCEDURES

2.1 Background Information for Establishing SLAMS

2.2 Total Suspended Particulates (TSP) Design Criteria for SLAMS

2.3 Sulfur Dioxide (SO_2) Design Criteria for SLAMS

2.4 Carbon Monoxide (CO) Design Criteria for SLAMS

2.5 Ozone (O_3) Design Criteria for SLAMS

2.6 Nitrogen Dioxide (NO_2) Design Criteria for SLAMS

3. NETWORK DESIGN FOR NATIONAL AIR MONITORING STATIONS (NAMS)

3.1 Total Suspended Particulates (TSP) Design Criteria for NAMS

3.2 Sulful Dioxide (SO_2) Design Criteria for NAMS

3.3 Carbon Monoxide (CO) Design Criteria for NAMS
3.4 Ozone (O_3) Design Criteria for NAMS
3.5 Nitrogen Dioxide (NO_2) Design Criteria for NAMS
4. SUMMARY
5. REFERENCES

[Text Omitted]

Appendix E—Probe Siting Criteria for Ambient Air Quality Monitoring

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2. Total Suspended Particulates (TSP)
2.1 Vertical Placement
2.2 Spacing from Obstructions
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2.4 Other Considerations
3. Sulfur Dioxide (SO_2)
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4.1 Horizontal and Vertical Probe Placement
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6. Nitrogen Dioxide (NO_2)
6.1 Vertical and Horizontal Prabe Placement
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7. Probe Material and Pollutant Sample Residence Time
8. Waiver Provisions
9. Discussion and Summary
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[Text Omitted]

Appendix F—Annual Slams Air Quality Information

1. General
2. Required information
2.1 Sulfur Dioxide (SO_2)
2.1.1. Site and Monitoring Information
2.1.2. Annual Summary Statistics
2.2 Particulates (TSP)
2.2.1 Site and Monitoring Information
2.2.2 Annual Summary Statistics
2.3 Carbon Monoxide (CO)
2.3.1 Site and Monitoring Information
2.3.2 Annual Summary Statistics
2.4 Nitrogen Dioxide (NO_2)
2.4.1 Site and Monitoring Information
2.4.2 Annual Summary Statistics
2.5 Ozone (O_3)
2.5.1 Site and Monitoring Information
2.5.2 Annual Summary Statistics

1. *General*

This apepndix describes information to be compiled and submitted annually to EPA for each ambient monitoring station in the SLAMS Network in accordance with § 58.26. The annual summary statistics that are described in section 2 below shall be construed as only the minimum necessary statistics needed by EPA to overview national air quality status. They will be used by EPA to convey information to a variety of interested parties including environmental groups, Federal agencies, the Congress, and private citizens upon request. As the need arises, EPA may issue modifications to these minimum requirements to reflect changes in EPA policy concerning the National Ambient Air Quality Standards (NAAQS).

As indicated in § 58.26(c), the contents of the SLAMS annual report shall be certified by the senior air pollu-

tion control officer in the State to be accurate to the best of his knowledge. In addition, the manner in which the data were collected must be certified to have conformed to the applicable quality assurance, air monitoring methodology, and probe siting criteria given in Appendices A, C, and E to this part. A certified statement to this effect must be included with the annual report. As required by § 58.26(a), the report must be submitted by July 1 of each year for data collected during the period January 1 to December 31 of the previous year.

EPA recognizes that most air pollution control agencies routinely publish air quality statistical summaries and interpretive reports. EPA encourages State and local agencies to continue publication of such reports and recommends that they be expanded, where appropriate, to include analysis of air quality trends, population exposure, and pollutant distributions. At their discretion, State and local agencies may wish to integrate the SLAMS report into routine agency publications.

2. *Required Information*

This paragraph describes air quality monitoring information and summary statistics which must be included in the SLAMS annual report. The required information is itemized below by pollutant. Throughout this appendix, the time of occurrence refers to the ending hour. For example, the ending hour of an 8-hour CO average from 12:01 a.m. to 8:00 a.m. would be 8:00 a.m.

2.1 *Sulfur Dioxide* (SO_2)

2.1.1 *Site and Monitoring Information.* City name (when applicable), county name and street address of site location. SAROAD site code. SAROAD monitoring method code. Number of hourly observations. (*1*) Number of daily observations. (*2*).

2.1.2 *Annual Summary Statistics.* Annual arithmetic mean (ppm). Highest and second highest 24-hour averages (*3*) (ppm) and dates of occurrence. Highest and

second highest 3-hour average (*1*, *3*) (ppm) and dates and times (*1*) (ending hour) of occurrence. Number of exceedances of the 24-hour primary NAAQS. (*3*) Number of exceedances of the 3-hour secondary NAAQS. (*3*) Number of 24-hour average concentrations (*4*) in ranges:

Range:	*Number of values*
0.00 to 4.04 (ppm)	
0.05 to 0.08	
0.09 to 0.12	
0.13 to 0.16	
0.17 to 0.20	
0.21 to 0.24	
0.25 to 0.28	
Greater than 28	

2.2 *Particulates* (TSP)

2.2 *Particulates* (TSP)

2.2.1 *Site and Monitoring Information.* City name (when applicable), county name and street address of site location. SAROAD site code. Number of daily observations.

2.2.2 *Annual Summary Statistics.* Annual geometric mean ($\mu g/m^3$). Highest and second highest daily values and dates of occurrence. Number of exceedances of the 24-hour primary NAAQS. Number of exceedances of the 24-hour secondary NAAQS. Number of 24-hour average concentrations in ranges:

Range:	*Number of values*
0 to 65 ($\mu g/m^3$)	
66 to 130	
131 to 195	
196 to 260	
261 to 325	
326 to 390	
391 to 455	
Greater than 455	

2.3 *Carbon Monoxide* (CO)

2.3.1 *Site and Monitoring Information.* City name (when applicable), county name and street address of site location. SAROAD site code. SAROAD monitoring method code. Number of hourly observations.

2.3.2 *Annual Summary Statistics.* Highest and second highest 1-hour values (ppm) and date and time of occurrence. Highest and second highest 8-hour averages (*3*) (ppm) and date and time of occurrence (*ending* hour). Number of exceedances of the 1-hour primary NAAQS. Number of exceedances of the 8-hour average primary NAAQS. (*3*) Number of 8-hour average concentrations (*4*) in ranges:

Range:	*Number of values*
0 to 4 (ppm)	
5 to 8 (ppm)	
9 to 12	
13 to 16	
17 to 20	
21 to 24	
25 to 28	
Greater than 28	

2.4 *Nitrogen Dioxide* (NO_2)

2.4.1 *Site and Monitoring Information.* City name (when applicable), county name, and street address of site location. SAROAD site code. SAROAD monitoring method code. Number of hourly observations. (*1*) Number of daily observations. (*2*).

2.4.2 *Annual Summary Statistics.* Annual arithmetic mean (ppm). Highest and second highest hourly averages (*3*) (ppm) and their dates and time of occurrence. Highest and second highest 24-hour averages (*2*) and

their date of occurrence (ppm). Number of hourly average concentrations in ranges. (*1*).

Range:	*Number of values*
.0 to .04 (ppm)	
.05 to .08	
.09 to .12	
.13 to .16	
.17 to .20	
.21 to .24	
.25 to .28	
Greater than 0.28	

2.5 *Ozone* (O_3)

2.5.1 *Site and Monitoring Information.* City name (when applicable), county name and street address of site location. SAROAD site code. SAROAD monitoring method code. Number of hourly observations.

2.5.2 *Annual Summary Statistics.* Four highest daily maximum hour values (ppm) and their dates and time of occurrence. Number of exceedances of the daily maximum 1-hour primary NAAQS. Number of daily maximum hour concentrations in ranges:

Range:	*Number of values*
0 to .04 (ppm)	
.05 to .08	
.09 to .12	
.13 to .16	
.17 to .20	
.21 to .24	
.25 to .28	
Greater than .28	

Footnotes

1. Continuous methods only.
2. Manual or intermittent methods only.
3. Based on nonoverlapping values computed according to procedures described in reference (1) or on individual intermittent measurements.

4. Based on overlapping running averages for continuous measurements as described in reference (1) or on individual measurement for intermittent methods.

REFERENCE

1. "Guidelines for the Interpretation of Air Quality Standards" U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711. OAQPS No. 1-2-008, February, 1977.

Appendix G—Uniform Air Quality Index and Daily Reporting

1. General.
2. Definitions.
3. Monitoring data.
4. Geographic applicability.
5. Daily index report.
6. Prominent public notice.
7. Uniform air quality index.
   7.1 Uniform index computation.
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10. Basis for PSI.
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12. References.

[Text Omitted]

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PART II

ENVIRONMENTAL PROTECTION AGENCY

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National Primary and Secondary Ambient Air Quality Standards

[SEAL]

Title 42—PUBLIC HEALTH

Chapter IV—Environmental Protection Agency

PART 410—NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS

Notices of proposed rule-making published in the FEDERAL REGISTER on January 30, 1971 (36 F.R. 1502) and March 26, 1971 (36 F.R. 5867) set forth regulations prescribing national primary and secondary ambient air quality standards proposed for adoption as Part 410 of 42 CFR. Interested persons were afforded an opportunity to participate in the rule-making by submitting comments. Following review of the proposed standards and consideration of the comments, the standards have been revised as described below and are being promulgated today.

National primary ambient air quality standards are those which, in the judgment of the Administrator, based

on the air quality criteria and allowing an adequate margin of safety, are requisite to protect the public health.

National secondary ambient air quality standards are those which, in the judgment of the Administrator, based on the air quality criteia, are requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of air pollutants in the ambient air.

The comments submitted to the Environmental Protection Agency reflect divergences of opinion among interested and informed persons as to the proper interpretation of available data on the public health and welfare effects of the six pollutants for which national ambient air qulaity standards are being established. A number of comments question the feasibility of implementing the proposed standards. Because the Clean Air Act, as amended, does not permit any factors other than health to be taken into account in setting the primary standards, no revisions were made on this basis. In reviewing the proposed standards, the Environmental Protection Agency limited its consideration to comments concerning the validity of the scientific basis of the standards.

Current scientific knowledge of the health and welfare hazards of these air pollutants is imperfect,. To increase and improve this knowledge, the Environmental Protection Agency will continue to conduct and support relevant research. At the same time, the need for increased knowledge of the health and welfare effects of air pollution cannot justify failure to take action based on knowledge presently available. The Clean Air Act, as amended, requires promulgation at this time of national standards for six air pollutants on the basis of available data set forth in air quality criteria documents. Thus, the Administrator is required to make judgments as to the proper interpretation of presently available data and to establish national primary standards which include an

adequate margin of safety to protect human health. Where the validity of available research data has been questioned, but not wholly refuted, the Administrator has in each case promulgated a national primary standard which includes a margin of safety adequate to protect the public health from adverse effects suggested by the available data.

The national primary standard for carbon monoxide, proposed on January 30, 1971, was based on evidence that low levels of carboxyhemoglobin in human blood may be associated with impairment of ability to discriminate time intervals. This evidence is reflected in "Air Quality Criteria for Carbon Monoxide" (35 F.R. 4768). In the comments, serious questions were raised about the soundness of this evidence. Extensive consideration was given to this matter. The conclusions reached were that the evidence regarding impaired time-interval discrimination had not been refuted and that a less restrictive national standard for carbon monoxide would therefore not provide the margin of safety which may be needed to protect the health of persons especially sensitive to the effects of elevated carboxyhemoglobin levels. The only change made in the national standards for carbon monoxide was a modification of the 1-hour value. The revised standard affords protection from the same low levels of blood carboxyhemoglobin as a result of short-term exposure. The national standards for carbon monoxide, as set forth below, are intended to protect against the occurrence of carboxyhemoglobin levels above 2 percent. It is the Administrator's judgment that attainment of the national standards for carbon monoxide will provide an adequate safety margin for protection of public health and will protect against known and anticipated adverse effects on public welfare.

National standards for photochemical oxidants have also been revised. The revised national primary standard

of 160 μg./m.^{3} (0.08 p.p.m.) is based on evidence of increased frequency of asthma attacks in some asthmatic subjects on days when estimated hourly average concentrations of photochemical oxidant reached 200 μg./m.^{3} (0.10 p.p.m.). A number of comments raised serious questions about the validity of data used to suggest impairment of athletic performance at lower oxidant concentrations. The revised primary standard includes a margin of safety which is substantially below the most likely threshold level suggested by this data. It is the Administrator's judgment that a primary standard of 160 μg./m.^{3} (0.08 p.p.m.) as a 1-hour average will provide an adequate safety margin for protection of public health and will protect against known and anticipated adverse effects on public welfare.

National standards for hydrocarbons have been revised to make these standards consistent with the above modifications of the national standard for photochemical oxidants. Hydrocarbons are a precursor of photochemical oxidants. The sole purpose of prescribing a hydrocarbon standard is to control photochemical oxidants. Accordingly, the above-described revisions of the national standards for photochemical oxidants necessitated a corresponding revision of the hydrocarbon standards.

National standards for nitrogen dioxide have been revised to eliminate the proposed 24-hour average value. No adverse effects on public health or welfare have been associated with short-term exposure to nitrogen dioxide at levels which have been observed to occur in the ambient air. Attainment of the annual average will, in the Administrator's judgment, provide an adequate safety margin for protection of public health and will protect against known and anticipated adverse effects on public welfare.

Apppendices A through F, which describe measurement methods, have been revised to clarify many techni-

cal points. As revised, each appendix describes a complete reference method for evaluating the ambient concentration of a pollutant for which national ambient air quality standards are being established.

Nine months after the date of publication of this notice, the States are required to submit to the Administrator, in accordance with section 110 of the Act, implementation plans for the attainment and maintenance of the national primary and secondary standards specified in this part. Requirements for the preparation, adoption, and submittal of implementation plans were published by the Administrator, as proposed rulemaking, in the FEDERAL REGISTER on April 7, 1971 (36 F.R. 6680).

In consideration of the foregoing and in accordance with the statements in the notice of proposed rulemaking, the national primary and secondary ambient air quality standards, Part 410, are hereby promulgated effective upon publication.

Dated: April 28, 1971.

WILLIAM D. RUCKELHAUS,
Administrator.

A new Part 410 is added to Chapter IV, Title 42, Code of Federal Regulations as follows:

Sec.

410.1 Definitions.

410.2 Scope.

410.3 Reference conditions.

410.4 National primary ambient air quality standards for sulfur oxides (sulfur dioxide).

410.5 National secondary amblient air quality standards for sulfur oxides (sulfur dioxide).

410.6 National primary ambient air quality standards for particulate matter.

410.7 National secondary ambient air quality standards for particulate matter.

410.8 National primary and secondary ambient air quality standards for carbon monoxide.

410.9 National primary and secondary ambient air quality standard for photochemical oxidants.

410.10 National primary secondary ambient air quality standard for hydrocarbons.

410.11 National primary and secondary ambient air quality standard for nitrogen dioxide.

Appendix A—Reference Method for the Determination of Sulfur Dioxide in the Atmosphere (Pararosaniline Method).

Appendix B—Reference Method for the Determination of Suspended Particulates in the Atosmphere (High Volume Method).

Appendix C—Reference Method for the Continuous Measurement of Carbon monoxide in the Atmosphere (Non-dispersive Infrared Spectrometry).

Appendix D—Reference Method for the Measurement of Photochemical Oxidants Corrected for Interferences Due to Nitrogen Oxide and Sulfur Dioxide.

Appendix E—Reference Method for the Determination of Hydrocarbons Corrected for Methane.

Appendix F—Reference Method for the Determination of Nitrogen Dioxide (24-Hour Sampling Method).

AUTHORITY: The provisions of this Part 410 issued under sec. 4, Public Law 01-604, Stat. 1679.

§ 410.1 Definitions.

(a) As used in this part, all terms not defined herein shall have the meaning given them by the Act.

(b) "Act" means the Clean Air Act, as amended (Public Law 91-604; 84 Stat. 1676).

(c) "Agency" means the Environmental Protection Agency.

(d) "Administrator" means the Administrator of the Environmental Protection Agency.

(e) "Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.

(f) "Reference method" means a method of sampling and analyzing for an air pollutant, as described in an appendix to this part.

(g) "Equivalent method" means any method of sampling and analyzing for an air pollutant which can be demonstrated to the Administrator's satisfaction to have a consistent relationship to the reference method.

§ 410.2 Scope.

(a) National primary and secondary ambient air quality standards under section 109 of the Act are set forth in this part.

(b) National primary ambient air quality standards define levels of air quality which the Administrator judges are necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards define levels of air quality which the Administrator judges' necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Such standards are subject to revision, and additional primary and secondary standards may be promulgated as the Administrator deems necessary to protect the public health and welfare.

(c) The promulgation of national primary and secondary ambient air quality standards shall not be considered in any manner to allow significant deterioration of existing air quality in any portion of any State.

(d) The proposal, promulgation, or revision of national primary and secondary ambient air quality standards shall not prohibit any State from establishing ambient air quality standards for that State or any portion thereof which are more stringent than the national standards.

§ 410.3 Reference conditions.

All measurements of air quality are corrected to a reference temperature of 25°C. and to a reference pressure of 760 millimeters of mercury (1,013.2 millibars).

§ 410.4 National primary ambient air quality standards for sulfur oxides (sulfur dioxide).

The national primary ambient air quality standards for sulfur oxides, measured as sulfur dioxide by the reference method described in Appendix A to this part, or by an equivalent method, are:

(a) 80 micrograms per cubic meter (0.03 p.p.m.)—annual arithmetic mean.

(b) 365 micrograms per cubic meter (0.14 p.p.m.)—Maximum 24-hour concentration not to be exceeded more than once per year.

§ 410.5 National secondary ambient air quality standards for sulfur oxides (sulfur dioxide).

The national secondary ambient air quality standards for sulfur oxides, measured as sulfur dioxide by the reference method described in Appendix A to this part, or by an equivalent method, are:

(a) 60 micrograms per cubic meter (0.02 p.p.m.)—annual arithmetic mean.

(b) 260 micrograms per cubic meter (0.1 p.p.m.)—maximum 24-hour concentration not to be exceeded more than once per year, as a guide to be used in assessing implementation plans to achieve the annual standard.

(c) 1,300 micrograms per cbuic [sic] meter (0.5 p.p.m.)—maximum 3-hour concentration not to be exceeded more than once per year.

§ 410.6 National primary ambient air quality standards for particulate matter.

The national primary ambient air quality standards for particulate matter, measured by the reference method described in Appendix B to this part, or by an equivalent method, are:

(a) 75 micrograms per cubic meter—annual geometric mean.

(b) 260 micrograms per cubic meter—maximum 24-hour concentration not to be exceeded more than once per year.

§ 410.7 National secondary ambient air quality standards for particulate matter.

The national secondary ambient air quality standards for particulate matter, measured by the reference method described in Appendix E to this part, or by an equivalent method, are:

(a) 60 micrograms per cubic meter—annual geometric mean, as a guide to be used in assessing implementation plans to achieve the 24-hour standard.

(b) 150 micrograms per cubic meter—maximum 24-hour concentration not to be exceeded more than once per year.

§ 410.8 National primary and secondary ambient air quality standards for carbon monoxide.

The national primary and secondary ambient air quality standards for carbon monoxide, measured by the reference method described in Appendix C to this part, or by an equivalent method, are:

(a) 10 milligrams per cubic meter (9 p.p.m.)—maximum 8-hour concentration not to be exceeded more than once per year.

(b) 40 milligrams per cubic meter (35 p.p.m.)—maximum 1-hour concentration not to be exceeded more than once per year.

§ 410.9 National primary and secondary ambient air quality standards for photochemical oxidants.

The national primary and secondary ambient air quality standard for photochemical oxidants, measured and corrected for interferences due to nitrogen oxides and sulfur dioxide by the reference method described in Appendix D to this part, or by an equivalent method, is: 160 micrograms per cubic meter (0.08 p.p.m.)—maximum 1-hour concentration not to be exceeded more than once per year.

§ 410.10 National primary and secondary air quality standard for hydrocarbons.

The hydrocarbons standard is for use as a guide in devising implementation plans to achieve oxidant standards.

The national primary and secondary ambient air quality standard for hydrocarbons, measured and corrected for methane by the reference method described in Appendix E to this part, or by an equivalent method, is: 160 micrograms per cubic meter (0.24 p.p.m.)—maximum 3-hour concentration (6 to 9 a.m.) not to be exceeded more than once per year.

§ 410.11 National primary and secondary ambient air quality standard for nitrogen dioxide.

The national primary and secondary ambient air quality standard for nitrogen dioxide, measured by the reference method described in Appendix F to this part, or by an equivalent method, is: 100 micrograms per cubic meter (0.05 p.p.m.)—annual arithmetic mean.

APPENDIX A.—REFERENCE METHOD FOR THE DETERMINATION OF SULFUR DIOXIDE IN THE ATMOSPHERE (PARAROSANILINE METHOD)

1. *Principle and Applicability.* 1.1 Sulfur dioxide is absorbed from air in a solution of potassium tetrachloromercurate (TCM). A dichlorosulfitomercurate complex, which resists oxidation by the oxygen in the air, is formed (*1*, *2*). Once formed, this complex is stable to strong oxidants (e.g., ozone, oxides of nitrogen). The complex is reacted with pararosaniline and formaldehyde to form intensely colored pararosanilline methyl sulfonic acid (*3*). The absorbance of the solution is measured spectrophotometrically.

1.2 The method is applicable to the measurement of sulfur dioxide in ambient air using sampling periods up to 24 hours.

2. *Range and Sensitivity.* 2.1 Concentrations of sulfur dioxide in the range of 25 to 1.050 $\mu g/m.^3$ (0.01 to 0.40 p.p.m.) can be measured under the conditions given. One can measure concentrations below 25 $\mu g/m.^3$ by sampling large volumes of air, but only if the absorption efficiency of the particular system is first determined. Higher concentrations can be analyzed by using smaller gas samples, a larger collection volume, or a suitable aliquot of the collected sample. Beer's Law is followed through the working range from 0.03 to 1.0 absorbence units (0.8 to 27 $\mu g.$ of sulfite ion in 25 ml. final solution computed as SO_2).

2.2 The lower limit of detection of sulfur dioxide in 10 ml. TCM is 0.75 $\mu g.^3$ (based on twice the standard de-

viation) representing a concentration of 25 μg./m SO_2 (0.01 p.p.m.) in an air sample of 30 liters.

3. *Interferences.*—3.1 The effects of the principal known interferences have been minimized or eliminated. Interferences by oxides of nitrogen are eliminated by sulfamic acid (*4*, *5*), ozone by time-delay (*6*), and heavy metals by EDTA (ethylenediamine-tetracetic acid, disodium salt) and phosphoric acid (*4*, *6*). At least 60 μg. Fe (III), 10 μg. Mn(II), and 10 μg. Cr.(III) in 10 ml. absorbing reagent can be tolerated in the procedure. No significant interference was found with 10 μg. CU (II) and 22 μg. V(V).

4. *Precision, Accuracy, and Stability.* 4.1 Relative standard deviation at the 95 percent confidence level is 4.6 percent for the analytical procedure using standard samples. (*5*)

4.2 After sample collection the solutions are relatively stable. At 22° C. losses of sulfur dioxide occur at the rate of 1 percent per day. When samples are stored at 5° C. for 30 days, no detectable losses of sulfur dioxide occur. The presence of EDTA enhances the stability of SO_2 in solution, and the rate of decay is independent of the concentration of SO_2 (*7*)

5. *Apparatus.*

5.1 *Sampling.*

5.1.1. *Absorber.* Absorbers normally used in air pollution sampling are acceptable for concentrations above 25 μg./m.^{3} (0.01 p.p.m.). An all-glass midget impinger, as shown in Figure A1, is recommended for 30-minute and 1-hour samples.

For 24-hour sampling, assemble an absorber from the following parts:

Polypropylene 2-port tube closures, special manufacture (available from Bel-Art Products, Pequannock, N.J.).

Glass impingers, 6 mm. tubing, 6 inches long, one end drawn to small diameter such that No. 79 jewelers will pass through, but No. 78 jewelers will not. (Other end fire polished.)

Polypropylene tubes, 164 by 32 mm. Nalgene or equal).

5.1.2 *Pump.* Capable of maintaining an air pressure differential greater than 0.7 atmosphere at the desired flow rate.

5.1.3 *Air Flowmeter or Critical Orifice.* A calibrated rotameter or critical orifice capable of measuring air flow within ± 2 percent. For 30-minute sampling, a 22-gauge hypodermic needle 1 inch long may be used as a critical orifice to give a flow of about 1 liter/minute. For 1-hour sampling, a 23-gauge hypodermic needle five-eights of an inch long may be used as a critical orifice to give a flow of about 0.5 liter/minute. For 24-hour sampling, a 27-gauge hypodermic needle three-eights of an inch long may be used to give a flow of about 0.2 liter/minute. Use a membrane filter to protect the needle (Figure A1a).

6.2 *Analysis.*

5.2.1 *Spectrophotometer.* Suitable for measurement of absorbence at 548 nm. with an effective spectral band width of less than 15 nm. Reagent blank problems may occur with spectrophotometers having greater spectral band width. The wavelength calibration of the instrument should be verified. If transmittance is measured, this can be converted to absorbance:

$$A = \log_{10} (1/T)$$

6. *Reagents.*

6.1 *Sampling.*

6.1.1 *Distilled water.* Must be free from oxidants.

6.1.2 *Absorbing Reagent [0.04 M Potassium Tetrachloromercurate (TCM)]*. Dissolve 10.86 g. mercuric chloride, 0.066 g. EDTA (thylenediaminetraactic acid, disodoum salt), and 6.0 g. potassium chloride in water and bring to mark in a 1,000-ml. volumetric flask. (Caution: highly poisonous. If spilled on skin, flush off with water immediately). The pH of this reagent should be approximately 4.0, but it has been shown that there is no appreciable difference in collection efficiency over the range of pH 5 to pH 3.(7) The absorbing reagent is normally stable for 6 months. If a precipitate forms, discard the reagent.

5.2 *Analysis.*

6.2.1 *Sulfamic Acid (0.6 percent)*. Disolve 0.6 sulfamic acid in 100 ml. distilled water. Prepare fresh daily.

6.2.2 *Formaldehyde (0.2 percent)*. Dilute 5 ml. formaldehyde solution (36-38 percent) to 1,000 ml. with distilled water. Prepare daily.

6.2.3 *Stock Iodine Solution (0.1 N)*. Place 12.7 g. iodine in a 250-ml. beaker; add 40 g. potassium iodine and 25 ml. water. Stir until all is dissolved, then dilute to 1,000 ml. with distilled water.

$$2.80 = \frac{10^3 \text{ (conversion of g. to mg.) X 0.1 (fraction iodate used)}}{35.67 \text{ (equivalent weight of potassium iodate)}}$$

6.2.4 *Iodine Solution (0.01 N)*. Prepare approximately 0.01 N iodine solution by diluting 50 ml. of stock solution to 500 mi. with distilled water.

6.2.5 *Starch Indicator Solution.* Triturate 0.4 g. soluble starch and 0.002 g. mercuric iodide (preservative) with a little water, and add the paste slowly to 200 ml. boiling water. Continue boiling until the solution is clear; cool, and transfer to a glass-stoppered bottle.

6.2.6 *Stock Sodium Thiosulfate Solution (0.1 N).* Prepare a stock solution by dissolving 25 g. sodium thiosulfate ($Na_2S_2O_3 5H_2O$) in 1,000 ml. freshly boiled, cooled, distilled water and add 0.1 g. sodium carbonate to the solution. Allow the solution to stand 1 day before standardizing. To standardize, accurately weigh, to the nearest 0.1 mg., 1.5 g. primary standard potassium iodate dried at 180° C. and dilute to volume in a 500-ml. volumetric flask. To a 500-ml. iodine flask, pipet 50 ml. of iodate solution. Add 2 g. potassium iodide and 10 ml. of 1 N hydrochloric acid. Stopper the flask. After 5 minutes, titrate with stock thiosulfate solution to a pale yellow. Add 5 ml. starch indicator solution and continue the titration until the blue color disappears. Calculate the normality of the stock solution:

$$N = \frac{W}{M} \times 2.80$$

N = Normality of stock thiosulfate solution.
M = Volume of thiosulfate required, ml.
W = Weight of potassium iodate, grams.
32,000 = Milliequivalent wt. of SO_2, μg.
25 = Volume standard sulfite solution, ml.
2.02 = Dilution factor.

This solution is stable for 30 days if kept at 5° C. (refrigerator). If not kept at 5° C., prepare daily.

6.2.7 *Sodium Thiosulfate Titrant (0.01 N).* Dilute 100 ml. of the stock thiosulfate solution to 1,000 ml. with freshly boiled distilled water.

Normality = Normality of stock solution X 0.100.

6.2.8 *Standardize Sulfite Solution for Preparation of Working Sulfite-TCM Solution.* Dissolve 0.3 g. sodium metabisulfite ($Na_2S_2O_5$) or 0.40g. sodium sulfite (Na_2SO_3) in 500 ml. of recently boiled, cooled, distilled water. (Sul-

fite solution is unstable; it is therefore important to use water of the highest purity to minimize this instability.) This solution contains the equivalent of 320 to 400 μg./ml. of SO_2. The actual concentration of the solution is determined by adding excess iodine and back-titrating with standard sodium thiosulfate solution. To back-titrate, pipet 50 ml. of the 0.01 N iodine into each of two 500-ml. iodine flasks (A and B). To flask A (blank) add 25 ml. distilled water, and to flask B (sample) pipet 25 ml. sulfite solution. Stopper the flasks and allow to react for 5 minutes. Prepare the working sulfite-TCM Solution (6.2.9) at the same time iodine solution is added to the flasks. By means of a buret containing standardized 0.01 N thiosulfate, titrate flask in turn to a pale yellow. Then add 5 ml. starch solution and continue the titration until the blue color disappears.

6.2.9 *Working Sulfite-TCM Solution.* Pipet accurately 2 ml. of the standard solution into a 100 ml. volumetric flask and bring to mark with 0.04 M TCM. Calculate the concentration of sulfur dioxide in the working solution:

$$\mu g\ SO_2/ml. = \frac{(A - B)\,(N)\,(32{,}000)}{25}\ 25X0.02$$

A = Volume thiosulfate for blank, ml.
B = Volume thiosulfate for sample, ml.
N = Normality or thiosulfate titrant.

6.2.10 *Purfied Pararosaniline Stock Solution (0.2 percent nominal).*

6.2.10.1 *Dye Specifications.* The pararosaniline dye must meet the following performance specifications: (1) the dye must have a wavelength of maximum absorbance at 540 nm. when assayed in a buffered solution of 0.1 M sodium acetate-acetic acid; (2) the absorbance of the reagent blank, which is temperature-sensitive (0.015 absorbance unit/°C), should not exceed 0.170 absorbance

unit at 22° C. with a 1-cm. optical path length, when the blank is prepared according to the prescribed analytical procedure and to the specified concentration of the dye; (3) the calibration curve (Section 8.2.1) should have a slope of 0.030 ± 0.002 absorbance units/μg. SO_2 at this path length when the dye is pure and the sulfite solution is properly standardized.

6.2.10.2 *Preparation of Stock Solution.* A specially purified (99-100 percent pure) solution of pararosaniline, which meets the above specifications, is commercially available in the required 0.20 percent concentration (Harleco*). Alternatively, the dye may be purified, a stock solution prepared and then assayed according to the procedure of Scaringelli, et al. (*4*)

6.2.11 *Pararosaniline Reagent.* To a 250-ml. volumetric flask, add 20 ml. stock pararosaniline solution. Add an additional 0.2 ml. stock solution for each percent the stock assays below 100 percent. Then add 25 ml. 3 M phosphoric acid and dilute to volume with distilled water. This reagent is stable for at least 9 months.

7. *Procedure.*

7.1 *Sampling.* Procedures are described for short-term (30 minutes and 1 hour) and for long-term (24 hours) sampling. One can select different combinations of sampling rate and time to meet special needs. Sample volumes should be adjusted, so that linearity is maintained between absorbance and concentration over the dynamic range.

7.1.1 *30-Minute and 1-hour Samplings.* Insert a midget impinger into the sampling system, Figure A1. Add 10 ml. TCM solution to the impinger. Collect sample at 1-liter/minute for 30 minutes, or at 0.5 liter/minute for

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* Hartmen-Leddon, 60th and Woodland Avenue, Philadelphia, PA 19143.

1 hour, using either a rotameter, as shown in Figure A1, or a critical orifice, as shown in Figure A1a, to control flow. Shield the absorbing reagent from direct sunlight during and after sampling by covering the impinger with aluminum foil, to prevent deterioration. Determine the volume of air sampled by multiplying the flow rate by the time in minutes and record the atmospheric pressure and temperature. Remove and stopper the impinger. If the sample must be stored for more than a day before analysis, keep it at 5° C. in a refrigerator (see 4.2).

7.1.2 *24-Hour Sampling.* Place 50 ml. TCM solution in a large absorber and collect the sample at 0.2 liter/minute for 24 hours from midnight to midnight. Make sure no entrainment of solution results with the impinger. During collection and storage protect from direct sunlight. Determine the total air volume by multiplying the air flow rate by the time in minutes. The correction of 24-hour measurements for temperature and pressure is extremely difficult and is not ordinarily done. However, the accuracy of the measurement will be improved if meaningful corrections can be applied. If storage is necessary, refrigerate at 5° C. (see 4.2).

7.2 *Analysis.*

7.2.1 *Sample Preparation.* After collection, if a precipitate is observed in the sample, remove it by centrifugation.

7.2.1.1 *30-Minute and 1-Hour Samples.* Transfer the sample quantitatively to a 25-ml. volumetric flask; use about 5 ml. distilled water for rinsing. Delay analyses for 20 minutes to allow any ozone to decompose.

7.2.1.2 *24-Hour Sample.* Dilute the entire sample to 50 ml. with absorbing solution. Pipet 5 ml. of the sample into a 25-ml. volumetric flask for chemical analyses. Bring volume to 10 ml. with absorbing reagent. Delay analyses for 20 minutes to allow any ozone to decompose.

7.2.2 *Determination.* For each set of determinations prepare a reagent blank by adding 10 ml. unexposed TCM

solution to a 25-ml. volumetric flask. Prepare a control solution by adding 2 ml. of working sulfite-TCM solution and 8 ml. TCM solution to a 25-ml. volumetric flask. To each flask containing either sample, control solution, or reagent blank, add 1 ml. 0.6 percent sulfamic acid and allow to react 10 minutes to destroy the nitrite from oxides of nitrogen. Accurately pipet in 2 ml. 0.2 percent formaldehyde solution, then 5 ml. pararosaniline solution. Start a laboratory timer that has been set for 30 minutes. Bring all flasks to volume with freshly boiled and cooled distilled water and mix thoroughly After 30 minutes and before 60 minutes, determine the absorbances of the sample (denote as A), reagent blank (denote as A_o) and the control solution at 548 nm. using 1-cm. optical path length cells. Use distilled water, not the reagent blank, as the reference. NOTE! This is important because of the color sensitivity of the reagent blank to temperature changes which can be induced in the cell compartment of a spectrophotometer.) Do not allow the colored solution to stand in the absorbance cells, because a film of dye may be deposited. Clean cells with alcohol after use. If the temperature of the determinations does not differ by more than 2° C. from the calibration temperature (8.2), the reagent blank should be within 0.03 absorbance unit of the y-intercept of the calibration curve (8.2). If the reagent blank differs by more than 0.03 absorbance unit from that found in the calibration curve, prepare a new curve.

7.2.3 *Absorbance Range.* If the absorbance of the sample solution ranges between 1.0 and 2.0, the sample can be diluted 1:1 with a portion of the reagent blank and read within a few minutes. Solutions with higher absorbance can be diluted up to sixfold with the reagent blank in order to obtain onscale readings within 10 percent of the true absorbance value.

8. *Calibration and Efficiences.*

8.1 *Flowmeters and Hypoderic Needle.* Calibrate flowmeters and hypodermic needle (8) against a calibrated wet test meter.

8.2 *Calibration Curves.*

8.2.1 *Procedure with Sulfite Solution.* Accurately pipet graduated amounts of the working sulfite-TCM solution (6.2.9) (such as 0, 0.5, 1, 2, 3, and 4 ml.) into a series of 25-ml. volumetric flasks. Add sufficient TCM solution to each flask to bring the volume to approximately 10 ml. Then add the remaining reagents as described in 7.2.2. For maximum precision use a constant-temperature bath. The temperature of calibration must be maintained within $\pm 1°$ C. and in the range of 20° to 30° C. The temperature of calibration and the temperature of analysis must be within 2 degrees. Plot the absorbance against the total concentration in μg. SO_2 for the corresponding solution. The total μg. SO_2 in solution equals the concentration of the standard (Section 6.2.9) in μg. SO_2/ml. times the ml. sulfite solution added (μg. SO_2 = μg./ml. SO_2 X ml. added). A linear relationship should be obtained, and the y-intercept should be within 0.03 absorbance unit of the zero standard absorbance. For maximum precision determine the line of best fit using regression analysis by the method of least squares. Determine the slope of the line of best fit, calculate its reciprocal and denote as B_a, B_a is the calibration factor. (See Section 6.2.10.1 for specifications on the slope of the calibration curve). This calibration factor can be used for calculating results provided there are no radical changes in temperature or pH. At least one control sample containing a known concentration of SO_2 for each series of determinations, is recommended to insure the reliability of this factor.

8.2.2 *Procedure with SO_2 Permeation Tubes.*

8.2.2.1 *General Considerations.* Atmospheres containing accurately known amounts of sulfur dioxide at levels of interest can be prepared using permeation tubes. In the systems for generating these atmospheres, the permeation tube emits SO_2 gas at a known, low, constant rate, provided the temperature of the tube is held con-

stant (± 0.1° C.) and provided the tube has been accurately calibrated at the temperature of use. The SO_2 gas permeating from the tube is carried by a low flow of inert gas to a mixing chamber where it is accurately diluted with SO_2-free air to the level of interest and the sample taken. These systems are shown schematically in Figures A2 and A3 and have been described in detail by O'Keeffe and Ortman (*9*), Scaringelli, Frey, and Saltzman (*10*), and Scaringelli, O'Keeffe, Rosenberg, and Bell (*11*).

8.2.2.2 *Preparation of Standard Atmospheres.* Permeation tubes may be prepared or purchased. Scaringelli, O'Keeffe, Rosenberg, and Bell (*11*) give detailed, explicit directions for permeation tube calibration. Tubes with a certified permeation rate are available from the National Bureau of Standards. Tube permeation rates from 0.2 to 0.4 μg./minute inert gas flows of about 50 ml./minute and dilution air flow rates from 1.1 to 15 liters/minutes conveniently give standard atmospheres containing desired levels of SO_2 (25 to 390 μg./m.$_3$ 0.01 to 0.15 p.p.m. SO_2). The concentration of SO_2 in any standard atmosphere can be calculated as follows:

$$C = \frac{P \times 10^3}{R_1 + R_2}$$

Where:

C = Concentration of SO_2, μg./m.^{3} at reference conditions.

P = Tube permeation rate, μg./minute.

R_1 = Flow rate of dilution air, liter/minute at reference conditions.

R_2 = Flow rate of inert gas, liter/minute at reference conditions.

8.2.2.3 *Sampling and Preparation of Calibration Curve.* Prepare a series (usually six) of standard atmospheres containing SO_2 levels from 25 to 390μg. SO_2/m^3. Sample each atmosphere using similar apparatus and taking exactly the same air volume as will be done in atmospheric sampling. Determine absorbances as directed in 7.2. Plot the concentration of SO_2 in μg./$m.^3$ (x-axis) against $A—A_0$ values (y-axis), draw the straight line of best fit and determine the scope. Alternatively, regression analysis by the method of least squares may be used to calculate the slope. Calculate the reciprocal of the slope and denote as B_s.

8.3 *Sampling Efficiency.* Collection efficiency is above 98 percent; efficiency may fall off, however, at concentrations below 25 μg./$m.^3$. (*12, 13*)

9. *Calculations.*

9.1 *Conversion of Volume.* Convert the volume of air sampled to the volume at reference conditions of 25° C. and 760 mm. Hg. (On 24-hour samples, this may not be possible.)

$$V_r = V \times \frac{P}{760} \times \frac{298}{t + 273}$$

V_r = Volume of air at 25° C. and 700 mm. Hg. liters.
V = Volume of air sampled, liters.
P = Barometric pressure, mm. Hg.
t = Temperature of air sample, °C.

9.2 *Sulfur Dioxide Concentration.*

9.2.1 When sulfite solutions are used to prepare calibration curves, compute the concentration of sulfur dioxide in the sample:

$$\mu g.\ SO_2/m.^3 = \frac{(A—A_0)\ (10^3)\ (B_s)}{V_r} XD$$

A = Sample absorbance.

A_0 = Reagent blank absorbance.

10_3 = Conversion of liters to cubic meters.

V_r = The sample corrected to 25° C. and 760 mm. Hg. liters.

B_s = Calibration factor, μg./absorbance unit.

D = Dilution factor.
For 30-minute and 1-hour samples, D = 1.
For 24-hour samples, D = 10.

9.2.2 When SO_2 gas standard atmospheres are used to prepare calibration curves, compute the sulfur dioxide in the sample by the following formula:

$$SO_2,\ \mu g./m.^3 = (A—A_0)\ X\ B_g$$

A = Sample absorbance.
A_0 = Reagent blank absorbance.
B_g = (See 8.2.2.3).

9.2.3 *Conversion of μg./m.³ to p.p.m.* = If desired, the concentration of sulfur dioxide may be calculated as p.p.m. SO_2 at reference conditions as follows:

$$\text{p.p.m. } SO_2 = \mu g.\ SO_2/m.^3\ X\ 3.82\ X\ 10^{-4}$$

10. *References.*

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APPENDIX B—REFERENCE METHOD FOR THE DETERMINATION OF SUSPENDED PARTICULATES IN THE ATMOSPHERE (HIGH VOLUME METHOD)

[Text Omitted]

APPENDIX C—REFERENCE METHOD FOR THE CONTINUOUS MEASUREMENT OF CARBON MONOXIDE IN THE ATMOSPHERE (NON-DISPERSIVE INFRARED SPECTROMETRY)

[Text Omitted]

APPENDIX D—REFERENCE METHOD FOR THE MEASUREMENT OF PHOTOCHEMICAL OXIDANTS CORRCTED FOR INTERFERENCES DUE TO NITROGEN OXIDES AND SULFUR DIOXIDE.

[Text Omitted]

APPENDIX E—REFERENCE METHOD FOR DETERMINATION OF HYDROCARBONS CORRECTED FOR METHANE

[Text Omitted]

APPENDIX F—REFERENCE METHOD FOR THE DETERMINATION OF NITROGEN DIOXIDE IN THE ATMOSPHERE (24-HOUR SAMPLING METHOD)

[Text Omitted]

PART 53—AMBIENT AIR MONITORING REFERENCE AND EQUIVALENT METHODS

Subpart A—General Provisions

Sec.

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53.2 General requirements for a reference method determination.
53.3 General requirements for an equivalent method determination.
53.4 Applications for reference or equivalent method determinations.
53.5 Processing of applications.
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53.9 Conditions of designation.
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Subpart B—Procedures for Testing Performance Characteristics of Automated Methods

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APPENDIX A—OPERATIONAL FORMS OF REPORTING TEST RESULTS

Subpart C—Procedures for Determining a Consistent Relationship Between Candidate Methods and Reference Methods

53.30 General provisions.
53.31 Test conditions.
53.32 Test procedures for gaseous pollutants.
53.33 Test procedures for lead methods.

APPENDIX A—OPTIONAL FORM FOR REPORTING TEST RESULTS

AUTHORITY: Section 301(a) of the Clean Air Act (42 U.S.C. Section 1857g(a)), as amended by sec. 15(c)(2) of Pub. L. 91-604, 84 Stat. 1713.

SOURCE: 40 FR 7049, Feb. 18, 1975, unless otherwise noted.

Subpart A—General Provisions

§ 53.1 Definitions.

(a) Terms used but not defined in this part shall have the meaning given them by the Act.

(b) "Act" means the Clean Air Act (42 U.S.C. 1857-1857*l*), as amended.

(c) "Agency" means the Environmental Protection Agency.

(d) "Administrator" means the Administrator of the Environmental Protection Agency or his authorized representative.

(e) "Reference method" means a method of sampling and analyzing the ambient air for an air pollutant that is specified as a reference method in an appendix to Part 50 of this chapter, or a method that has been designated as a reference method in accordance with this part: it does not include a method for which a reference method designation has been cancelled in accordance with § 53.11 or § 53.16.

(f) "Equivalent method" means a method of sampling and analyzing the ambient air for an air pollutant that has been designated as an equivalent method in accordance with this part; it does not include a method for which an equivalent method designation has been cancelled in accordance with § 53.11 or § 53.16.

(g) "Candidate method" means a method of sampling and analyzing the ambient air for an air pollutant for which an application for a reference method determination or an equivalent method determination is submitted in accordance with § 53.4, or a method tested at the initiative of the Administrator in accordance with § 53.7.

(h) "Manual method" means a method for measuring concentrations of an ambient air pollutant in which sample collection, analysis, or measurement, or some combination thereof, is performed manually.

(i) "Automated method" or "analyzer" means a method for measuring concentrations of an ambient air pollutant in which sample collection, analysis, and measurement are performed automatically.

(j) "Test analyzer" means an analyzer subjected to testing as a candidate method in accordance with Subpart B of this part, Subpart C of this part, or both.

(k) "Applicant" means a person who submits an application for a reference or equivalent method determination under § 53.4, or a person who assumes the rights and obligations of an applicant under § 53.7.

(l) "Ultimate purchaser" means the first person who purchases a reference method or an equivalent method for purposes other than resale.

[40 FR 7049, Feb. 18, 1975, as amended at 41 FR 11255, Mar. 17, 1976]

[Remainder of Subpart A Omitted]

Subpart B—Procedure for Testing Performance Characteristics of Automated Methods

[Text of Subpart B Omitted]

Subpart C—Procedures for Determining a Consistent Relationship Between Candidate Methods and Reference Methods

§ 53.30 General provisions.

(a) *Determination of Consistent Relationship.* The test procedures given in this subpart shall be used to determine if a candidate method has a consistent relationship to a reference method when both methods measure pollutant concentrations in a real atmosphere.

(1) A consistent relationship is shown for SO_2, CO, O_3, and NO_2 methods when the differences between: (i) Measurements made by a candidate manual method or by a test analyzer representative of a candidate automated method, and (ii) measurements made simultaneously by a reference method are less than or equal to the value specified in the last column of table C-1.

(2) A consistent relationship is shown for lead methods when the differences between: (i) Measurements made by a candidate method, and (ii) measurements made simultaneously by the reference method are less than or equal to the value specified in table C-3.

(b) *Selection of test sites*—(1) *All methods.* Each test site shall be in a predominately urban area which can be shown to have at least moderate concentrations of various pollutants. The site shall be clearly identified and shall be justified as an appropriate test site with suitable supporting evidence such as maps, population density data, vehicular traffic data, emission inventories, pollutant measurements from previous years, concurrent pollutant measurements, and wind or weather data. If desired, a request for approval of the test site or sites

may be submitted prior to conducting the tests. The Administrator may in his discretion select a different site (or sites) for any additional tests he decides to conduct.

(2) *Methods for gaseous pollutants.* All test measurements are to be made at the same test site. If necessary, the concentration of pollutant in the sampled ambient air may be augmented with artificially generated pollutant to facilitate measurements in the specified ranges. (See paragraph (d) (2) of this section.)

(3) *Methods for lead.* Test measurements may be made at any number of test sites. Augmentation of pollutant concentrations is not permitted, hence an appropriate test site or sites must be selected to provide lead concentrations in the specified range. Test sites for lead measurements must be located near a heavily traveled roadway.

(c) *Test atmosphere.* Ambient air sampled at an appropriate test site shall be used for these tests. Simultaneous concentration measurements shall be made in each of the concentration ranges specified in table C-1 or table C-3.

(d) *Sample collection*—(1) *All methods.* All test concentration measurements or samples shall be taken in such a way that both the candidate method and the reference method receive air samples that are homogenous or as nearly identical as practical.

(2) *Methods for gaseous pollutants.* Ambient air shall be sampled from a common intake and distribution manifold designed to deliver homogenous air samples to both methods. Precautions shall be taken in the design and construction of this manifold to minimize the removal of particulates and trace gases, and to insure that identical samples reach to two methods. If necessary, the concentration of pollutant in the sampled ambient air may be augmented with artifically generated pollutant.

However, at all times the air sample measured by the candidate and reference methods under test shall consist of not less than 80 percent ambient air by volume. Schematic drawings, physical illustrations, descriptions, physical illustrations, descriptions, and complete details of the manifold system and the augmentation system (if used) shall be submitted.

(3) *Methods for lead.* The intake points of the candidate and reference samplers for lead shall be located at the same height, at the same distance from the source, and between 3 and 5 meters apart.

(4) *Methods employing a common sampling procedure.* Candidate methods which employ a sampler and sample collection procedure which are identical to the sampler and sample collection procedure specified in the reference method may be tested by analyzing common samples in accordance with the candidate and reference analysis procedures. The common samples are to be collected according to the sample collection procedure specified by the reference method, and must be divided such that identical portions are analyzed by the analysis procedures of the two methods.

(e) *Submission of test data and other information.* All recorder charts, calibration data, records, test results, procedural descriptions and details, and other documentation obtained from (or pertinent to) these tests shall be identified, dated, signed by the analyst performing the test, and submitted.

(Secs. 110, 301(a), Clean Air Act as amended (42 U.S.C. 7410, 7601))

[40 FR 7049, Feb. 18, 1975 and 44 FR 37916, June 29, 1979]

EFFECTIVE DATE NOTE: At 44 FR 37916, June 29, 1979, paragraph (a) was amended and paragraphs (b),

(c), (d), and (e) of § 53.30 were revised, effective July 30, 1979. For the convenience of the user, the superseded text is set forth below:

§ 53.30 General provisions.

(a) *Determination of Consistent Relationship.* The test procedures given in this subpart shall be used to determine if a candidate method has a consistent relationship to a reference method when both methods measure pollutant concentrations in a real atmosphere. A consistent relationship is shown when the differences between (1) measurements made by a candidate manual method or by a test analyzer representative of a candidate automated method, and (2) measurements made simultaneously by a reference method are less than or equal to the value specified in the last column of Table C-1.

(b) *Selection of Test Sites.* The test site shall be in a predominantly urban area away from large bodies of water, and shall be one having a history of at least moderate concentrations of various pollutants. The site shall be clearly identified and shall be justified with suitable supporting evidence such as maps, population density data, vehicular traffic data, emission inventories, pollutant measurements from previous years, concurrent pollutant measurements, and wind or weather data. The Administrator may in his discretion select a different site (or sites) for any additional tests he decides to conduct.

(c) *Test Atmosphere.* Ambient air sampled at the test site shall be used for these tests. Simultaneous concentration measurements shall be made in each of three ranges as specified in Table C-1. If necessary, the concentration of pollutant in the sampled ambient air may be augmented with artifically generated pollutant to facilitate measurements in these specified ranges. However, at all times the gas measured by the candidate and

reference methods under test shall consist of not less than 80 percent ambient air by volume.

(d) *Submission of Test Data and Other Information.* All recorder charts, calibration data, records, test data, procedural descriptions and details, and other documentation obtained from (or pertinent to) these tests shall be identified, dated, signed by the analyst performing the test, and submitted.

(e) *Sample Manifold.* All test concentration measurements shall be made on air sampled from a common intake and distribution manifold, and in such a way that both the candidate method and the reference method receive homogeneous air samples. Precautions shall be taken in the design and construction of this manifold to minimize the removal of particulates and trace gases, and to insure that identical samples reach the two methods. Schematic drawings, physical illustrations, descriptions, and complete details of this manifold system shall be submitted.

§ 53.31 Test conditions.

(a) *All methods.* All test measurements made or test samples collected by means of a sample manifold as specified in § 53.30(d) (2) shall be at a room temperature between 20° and 30° C, and at a line voltage between 105 and 125 volts. All methods shall be calibrated as specified in paragraph (c) of this section prior to initiation of the tests.

(b) *Automated Methods.* Set-up and start-up of the test analyzer (and the reference method if automated) shall be in strict accordance with the applicable operation manual(s). If the test analyzer does not have an integral strip chart recorder, connect the analyzer output to a suitable strip chart recorder of the servo, null-balance type. This recorder shall have a chart width of at least 25 centimeters, a response time of 1 second or less, a deadband of not more than 0.25 percent of full scale, and

capability of either reading measurements at least 5 percent below zero or offsetting the zero by at least 5 percent.

NOTE.—Other data acquisition components may be used along with the chart recorder during the conduct of these tests. Use of the chart recorder is intended only to facilitate evaluation of data submitted.

Allow adequate warmup or stabilization time as indicated in the applicable operation manual(s) before beginning the tests.

(c) *Calibration.* The reference method shall be calibrated according to the appropriate appendix to Part 50 of this chapter (if it is a manual method) or according to the applicable operation manual(s) (if it is an automated method). A candidate manual method (or portion thereof) shall be calibrated if such calibration is a part of the method.

(d) *Range.* (1) Except as provided in paragraph (d)(2) of this section, each method shall be operated in the range specified for the reference method in the appropriate appendix to Part 50 (for manual reference methods), or specified in table B-1 of this part (for automated reference methods).

(2) For a candidate method having more than one selectable range, one range must be that specified in Table B-1 and a test analyzer representative of the method must pass the tests required by this subpart while operated in that range. The tests may be repeated for a broader range (i.e., one estanding to higher concentrations) than the one specified in Table B-1, provided that the range does not extend to concentrations more than two times the upper range limit specified in Table B-1 and that the test analyzer has passed the tests required by Subpart B of this part (if applicable) for the broader range. If the tests required by this subpart are conducted or passed only for the range specified in Table

B-1, any equivalent method determination with respect to the method will be limited to that range. If the tests are passed for both the specified range and a broader range (or ranges), any such determination will include the broader range(s) as well as the specified range. Appropriate test data shall be submitted for each range sought to be included in such a determination.

(e) *Operation of Automated Methods.* (1) Once the test analyzer has been set up and calibrated and tests started, manual adjustment or normal periodic maintenance is permitted only every 3 days. Automatic adjustments which the test analyzer performs by itself are permitted at any time. At 3-day intervals only adjustments and periodic maintenance as specified in the manual referred to in § 53.4(b)(3) are permitted. The submitted records shall show clearly when manual adjustments were made and describe the operations performed.

(2) All test measurements shall be made with the same test analyzer, use of multiple test analyzers is not permitted. The test analyzer shall be operated continuously during the entire series of test measurements.

(3) If a test analyzer should malfunction during any of these tests, the entire set of measurements shall be repeated, and a detailed explanation of the malfunction, remedial action taken, and whether recalibration was necessary (along with all pertinent records and charts) shall be submitted.

(Secs. 110, 301(a), Clean Air Act as amended (42 U.S.C. 7410, 7601))

[40 FR 7049, Feb. 18, 1975, as amended at 40 FR 18169, Apr. 25, 1975; 44 FR 37917, June 29, 1979]

EFFECTIVE DATE NOTE: At 44 FR 37917, June 29, 1979, in § 53.31 paragraphs (a), (c), and (d)(1) were

revised, effective July 30, 1979. For the convenience of the user, the superseded text is set forth below.

§ 53.31 Test conditions.

(a) *All Methods.* All test measurements made or test samples collected shall be at a room temperature between 20° and 30° C., and at a line voltage between 105 and 125 volts. All methods shall be calibrated as specified in paragraph (c) of this section prior to initiation of the tests.

(b) * * *

(c) *Calibration.* The reference method shall be calibrated according to the applicable operation manual. A candidate manual method (or portion thereof) shall be calibrated if such calibration is a part of the method. For a candidate automated method, the test analyzer shall be calibrated according to the manual referred to in § 53.4(b)(3) and as follows: If the chart recorder does not have below zero capability, adjust either the test analyzer's controls or the chart recorder to obtain a +5 percent offset zero reading on the recorder chart to facilitate observing negative drift. Construct and submit a calibration curve showing a plot of recorder scale readings (ordinate) against pollutant concentrations (abscissa). A plot of test analyzer output units (volts, millivolts, milliamps, etc.) against pollutant concentrations shall also be shown for candidate methods not including integral chart recorders. All such plots shall consist of at least seven (7) approximately equally spaced, identifiable points, including 0 and 90 ± 5 percent of full scale.

(d) *Range.* (1) Except as provided in paragraph (d)(2) of this section, each method shall be operated in the range specified in Table B-1 of Subpart B of this part.

* * * *

§ 53.32 Test procedures for gaseous pollutants.

(a) Conduct the first set of simultaneous measurements with the candidate and reference methods:

(1) Table C-1 specifies the type (1- or 24-hour) and number of measurements to be made in each of the three test concentration ranges.

(2) The pollutant concentration must fall within the specified range as measured by the reference method.

(3) The measurements shall be made in the sequence specified in Table C-2, except for the 1-hour SO_2 measurements, which are all in the high range.

(b) For each pair of measurements, determined the difference (discrepancy) between the candidate method measurement and reference method measurement. A discrepancy which exceeds the discrepancy specified in Table C-1 constitutes a failure. (See Figure C-1 in Appendix A for a suggested format for reporting the test results).

(c) The results of the first set of measurements shall be interpreted as follows:

(1) Zero (0) failures: The candidate method passes the test for consistent relationship.

(2) Three (3) or more failures: The candidate method fails the test for consistent relationship.

(3) One (1) or two (2) failures: Conduct a second set of simultaneous measurements as specified in Table C-1. The results of the combined total of first-set and second-set measurements shall be interpreted as follows:

(i) One (1) or two (2) failures: The candidate method passes the test for consistent relationship.

(ii) Three (3) or more failures: The candidate method fails the test for consistent relationship.

(4) For sulfur dioxide, the 1-hour and 24-hour measurements shall be interpreted separately, and the candidate method must pass the tests for both 1- and 24-hour measurements to pass the test for consistent relationship.

(d) A 1-hour measurements consists of the integral of the instantaneous concentration over a 60-minute continuous period divided by the time period. Integration of the instantaneous concentration may be performed by any appropriate means such as chemical, electronic, mechanical, visual judgment, or by calculating the mean of not less than 12 equally spaced instantaneous readings. Appropriate allowances or corrections shall be made in cases where significant errors could occur due to characteristic lag time or rise/fall-time differences between the candidate and reference methods. Details of the means of integration and any corrections shall be submitted.

(e) A 24-hour measurement consists of the integral of the instantaneous concentration over a 24-hour continuous period divided by the time period. This integration may be performed by any appropriate means such as chemical, electronic, mechanical, or by calculating the mean of twenty-four (24) sequential 1-hour measurements.

(f) For oxidant and carbon monoxide, no more than six (6) 1-hour measurements shall be made per day. For sulfur dioxide, no more than four (4) 1-hour measurements or one (1) 24-hour measurement shall be made per day. One-hour measurements may be made concurrently with 24-hour measurements if appropriate.

(g) For applicable methods, control or calibration checks may be performed once per day without adjusting the test analyzer or method. These checks may be used as a basis for a linear interpolation-type correction to be applied to the measurements to correct for drift. If such a correction is used, it shall be applied to all meas-

urements made with the method, and the correction procedure shall become a part of the method.

TABLE C-1—*Test concentration ranges, number of measurements required, and maximum discrepancy specification*

Pollutant	Concentration range parts per million	Simultaneous measurements required				Maximum discrepancy specification, parts per million
		1-hr.		24-hr.		
		First set	Second set	First set	Second set	
Oxidants	Low 0.06 to 0.10	5	6			0.02
	Med 0.15 to 0.25	5	6			.03
	High 0.35 to 0.45	4	6			.04
Total		14	18			
Carbon monoxide	Low 7 to 11	5	6			1.5
	Med 20 to 30	5	6			2.0
	High 35 to 45	4	6			3.0
Total		14	18			
Sulfur dioxide	Low 0.02 to 0.05			3	3	0.02
	Med 0.10 to 0.15			2	3	.03
	High 0.30 to 0.50	7	8	2	2	.04
Total		7	8	7	8	
Nitrogen dioxide	Low 0.02 to 0.08			3	3	0.02
	Med 0.10 to 0.20			2	3	.02
	High 0.25 to 0.35			2	2	.03
Total				7	8	

TABLE C-2 SEQUENCE OF TEST MEASUREMENTS

Measurement	Concentration range	
	First Set	Second set
1	Low	Medium
2	High	High
3	Medium	Low
4	High	High
5	Low	Medium
6	Medium	Low
7	Low	Medium
8	Medium	Low
9	High	High
10	Medium	Low
11	High	Medium
12	Low	High
13	Medium	Medium
14	Low	High
15		Low
16		Medium
17		Low
18		High

(Secs. 110, 301(a), Clean Air Act as amended (42 U.S.C. 7410, 7601))

[40 FR 7049, Feb. 18, 1975, as amended at 41 FR 52693, Dec. 12, 1976; 44 FR 37917, June 29, 1979]

EFFECTIVE DATE NOTE: At 44 FR 37917, June 29, 1979, the heading for § 53.32 was revised, effective July 30, 1979. For the convenience of the user, the superseded heading is set forth as follows:

§ 53.32 Test procedures.

* * * *

[Remainder of Subpart C Omitted]

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The Honorable Douglas M. Costle
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Request for Clarification of Interpretation

Dear Mr. Costle:

On August 7, 1978, EPA proposed to replace the ambient air quality surveillance and data reporting regulations in Part 51 with a new Part 58 and to revise those reporting requirements in several respects. *See* 43 Fed. Reg. 34812 *et seq.* (Aug. 7, 1978). These revised regulations were promulgated on May 10, 1979, at 44 Fed. Reg. 27558 *et seq.* Appendix F to the new Part 58 provides, in part, that 24-hour averages for SO_2 be reported "[b]ased on overlapping running averages for continuous measurements . . ." The requirement that concentrations of SO_2 be reported based on running aver-

ages was included in the final regulations without any previous notice. Notwithstanding the absence of any indication by EPA that this provision was intended to be anything other than a reporting requirement (*see* pp. 5-7 below), several states and EPA regions have moved to enforce ambient standards on a running average, rather than a calendar-day, basis. In addition, pending litigation in the D.C. Circuit raises the possibility that EPA itself intends to treat this provision as affecting the determination of compliance with ambient standards. *PPG Industries, Inc.* v. *Costle*, No. 79-1708 (D.C. Cir., filed July 9, 1979).

Under 40 C.F.R. § 50.4 and Appendix A, compliance with the 24-hour SO_2 ambient standard is to be determined on a calendar-day basis (*see* pp. 2-5 below). If compliance with the SO_2 ambient standards were determined on a running basis, sources would be confronted by a significantly more stringent standard without the benefit of required rulemaking procedures. Your staff has recognized that such a change could result in some cases in a 30 to 40 percent tightening of the SO_2 ambient standard. *See* Thomas Curran, "Guidelines for Interpretation of Air Quality Standards," Issue 7A (February 1977) (prepared for U.S. EPA) [hereafter 1977 Guideline]. Preliminary studies performed by a consultant of the Utility Air Regulatory Group (UARG)[1] indicate that in many cases this improper interpretation would result in a 10 to 30 percent tightening of the SO_2 ambient standard.

UARG needs to know the Agency's interpretation of the unanticipated changes in Appendix F of the final regulations (referenced in § 58.26 of the final regulations). The Part 58 regulations, on their face, merely

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[1] UARG membership includes 85 individual electric utilities, the Edison Electric Institute, and the National Rural Electric Cooperative Association. UARG members are listed in Attachment A.

define requirements for reporting ambient monitoring data. They cannot and do not change the requirement in 40 C.F.R. Part 50 that compliance with the 24-hour SO_2 standard be determined on a calendar-day basis. Those EPA regions and states that have misconstrued Apuendix F to require enforcement of the standard on a rolling average basis have, by their actions, rendered *significantly more stringent* the existing 24-hour SO_2 ambient air quality standard. UARG therefore requests that you clarify that new § 58.26 and Appendix F are reporting requirements only, and in no way affect the Part 50 and 53 requirements that compliance with the 24-hour standard be determined on a calendar-day basis.

I. 40 C.F.R. Part 50 Requires that Compliance With the 24-Hour SO_2 Ambient Standard Be Determined on a Calendar-Day Basis

Ambient standards for sulfur dioxide were originally promulgated on April 30, 1971. These standards, which are set forth in 40 C.F.R. Part 50, provide that: "The . . . ambient air quality standards for sulfur oxides, measured as sulfur dioxide *by the reference method described in Appendix A to this part, or by an equivalent method*, are [specified numerical limitations] . . ." 40 C.F.R. § 50.4 (1978); 36 Fed. Reg. 8187 (April 30, 1971) (emphasis added). The reference method specifies that 24-hour sampling for SO_2 must take place "from midnight to midnight." 40 C.F.R. Part 50, Appendix A, § 7.1.2 (1978); 36 Fed. Reg. 8189 (April 30, 1971).[2]

The incorporation of the measurement technique into the ambient standard itself reflects the principle that "the

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[2] The preamble to the ambient standard promulgation indicates that this "midnight to midnight" requirement was added to promulgated reference method in order to clarify how ambient concentrations of pollutants would be evaluated. *See* 36 Fed. Reg. 8186, col. 3 (April 30, 1971).

method used for data gathering to establish a standard *must be the same as, or must have a known relationship to,* the method subsequently established as a reference method." 40 Fed. Reg. 16252 (1975) (emphasis added); *see Portland Cement Ass'n* v. *Ruckelshaus,* 486 F.2d 375, 396-97 (D.C. Cir. 1973). *Cf.* 43 Fed. Reg. 34342 (1978); 38 Fed. Reg. 10820 (1973). The data on which the SO_2 standard is based are *calendar-day* data.[3] The use of calendar-day data was necessitated by measurement techniques used at the time, which techniques yielded only discrete 24-hour measurements.[4] As a result, the standard was not, and could not be, based on a running average. In keeping with the manner in which the standard was set, EPA consistently enforced the SO_2 ambient standard on a calendar day basis. *See* 1974 Guideline, Issue 7A; Larsen, "An Air Quality Data Analysis System For Interrelating Effects, Standards and Needed Source Reductions." 23 *J. Air Pollution Control* 544, 533-34 (Nov. 1973); Curran *et al.*, "Interpretation of Air Quality Data with Respect to the National Ambient Air Quality Standards," 25 *J. Air Pollution Control* 711, 712 (July 1975).

In addition, air quality standards must be defined in terms of specified measurement techniques because differ-

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[3] The original SO_2 Criteria Document (AP-50) continuously references daily averages, and equates the term "24-hour averages" with daily averages. *See* U.S. Dept. of Health, Education, and Welfare, *Air Quality Critria for Sulfur Oxides* 33-47 (Washington, D.C. April 1970) (National Air Pollution Control Administration Publication No. AP-50) (hereafter SO_2 Criteria Document (AP-50)). *Cf.* U.S. EPA, Guidelines for the Interpretation of Air Quality Standards, Issue 7A (August 1974) (hereafter 1974 Guideline).

[4] *See* 36 Fed. Reg. 8189 (April 30, 1971). In addition, the SO_2 Criteria Document (AP-50) included data derived from the National Air Surveillance Networks (NASNs) as a basis for the SO_2 ambient. NASNs yielded 26 daily samples per year. *See* SO_2 Criteria Document (AP-50) 46.

ent techniques record different levels of a substance measured. As stated in a study on which the SO_2 Criteria Document (AP-50) relies, "[A] standard for the limitation of air pollution is not complete if the way in which this standard should be controlled is not described exactly."[5] EPA has repeatedly recognized this principle.[6] The reference method requiring daily sampling is thus an integral part of the SO_2 ambient standard.

In summary, since ambient standards were based on 24-hour calendar-day data, the methods used to determine compliance with the ambient standards have also been expressed in terms of calendar averages.[7] These methods are incorporated into 40 C.F.R. Part 50. Therefore, for rolling averages to become compliance requirements, the Agency would have to amend 40 C.F.R. Part 50 in accordance with section 307(d) of the Act. *See also* 40

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[5] L. Braser, *et al.*, *Sulphur Dioxide—to what level is it acceptable?* 12, 18 (July 1967) (translation from Dutch published by Research Institute for Public Health Engineering).

[6] For example, in a recent document, EPA states that changing the method of compliance determination with emission limitations from a short-term performance test basis to a continuous basis "could result in extensive SIP revisions and/or significant fuel dislocations." EPA, "Development Plan for Implementation of Continuous Monitoring of Air Pollution Sources" 4 (Aug. 9, 1979) (Docket No. OAQPS-79-12).

[7] For example, Appendix A of 40 C.F.R. Part 50 requires midnight-to-midnight sampling for the SO_2 reference method. EPA has not attempted to change the reference method for SO_2 to incorporate the running average methodology. And the ambient air quality *equivalent* methods in 40 C.F.R. Part 53, Subparts B and C, focus on "one (1) 24-hour meaurement . . . per day," even when continuous analyzers are evaluated. This test for equivalency reflects the calendar day basis on which the SO_2 ambient standard was originally set. This approach makes sense, since the use of continuous analyzer data on other than a calendar-day basis would result in substantial differences in reported concentrations. *See* pp. 1 to 2 above.

C.F.R. § 53.16 (1978). No such amendments to 40 C.F.R. Part 50 have even been proposed, much less promulgated.[8] Since EPA has not attempted to alter these rules, the running average language in Appendix F cannot be interpreted to affect compliance determination.

II. Appendix F of Part 58 is What it Purports to Be —A Reporting Requirement

The new Part 58 is intended to serve two purposes. First, it "contains criteria and requirements for ambient air quality monitoring," and thereby replaces the previous monitoring requirements for state implementation plans (SIP), located at 40 C.F.R. § 51.17a. 40 C.F.R. § 58.2 (a); *see* 44 Fed. Reg. 27558, 27569 (May 10, 1979).[9] Second, it provides "requirements for reporting ambient air quality data and information." 40 C.F.R. § 58.2(a).

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[8] In February 1977, an EPA Guideline document suggested that the manner in which compliance with the 24-hour SO_2 ambient standard was determined should be *changed* to a running 24-hour average interpretation in *"borderline situations." See* 1977 Guideline. This suggestion that the compliance method be changed in "borderline situations"—whatever that means—was never even published in the *Federal Register*, much less proposed as an amendment to the Part 50 regulations. In fact, in May 1977 EPA published another interpretive document which affirmed that compliacne with the 24-hour SO_2 ambient standard was to be determined on a calendar-day basis. *See* EPA, Quality Assurance Handbook for Air Pollution Measurement Systems, Vol. II—Ambient Air Specific Methods 19 (RTP, May 1977).

[9] The monitoring requirements to be applied in measuring ambient concentrations of pollutants are detailed in Appendices A through E to Part 58. They provide:

(1) Quality assurance procedures for monitor operation and data handling.

(2) Methodology used in monitoring stations.

(3) Operating schedules.

(4) Siting parameters for instruments or instrument probes.

40 C.F.R. § 58.2(a)(1)-(4); *see* 40 C.F.R. Subpart B.

Nowhere does it purport to change the Part 50 reference methods which define how ambient standards compliance is to be determined.

Appendix F of Part 58 merely describes the form in which data is to be submitted to EPA in annual reports. As proposed, the Appendix provided that reporting 24-hour averages for SO_2 would be "[b]ased on *midnight-to-midnight* for continuous methods." 43 Fed. Reg. 34928 (Aug. 7, 1978). This reporting requirement tracked the applicable reference method in Part 50. The preamble to the proposed rule did not solicit comment upon, or suggest that the Agency was giving any consideration to, adopting any reporting requirement that differed from the reference method. Nevertheless, the May 10 promulgation departed, without explanation, from the proposal by requiring reporting on a running average basis. 44 Fed. Reg. 27598 (May 10, 1979). While this change will lead to reporting data in a manner that is different from the way in which the data is evaluated for compliance purposes, there is nothing in logic or law to conclude that a change in reporting must somehow imply a change in the compliance method.[10] Indeed, such a conclusion is flatly contradicted by the fact that the new Appendix F reporting requirement (1) is not immediately effective, and (2) does not require the reporting of only running average data.

New § 58.27 provides that "the annual air quality data reporting requirements of § 58.26 [which references Ap-

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[10] We recognize, of course, that there may be important reasons for a reporting requirement such as new § 58.26 independent of showing compliance with ambient standards. The required reports will generate useful and comparable information for EPA and the states. Such information will be helpful, for example, in future ambient standard reviews. EPA has taken this approach in other programs. For example, under the old NSPS for electric utilities EPA required sources to collect and report continuous monitoring data, yet to determine compliance with emission limitations based on short-term reference method tests.

pendix F] apply to data collected *after* December 31, 1980." (Emphasis added.) In the interim, data may be reported in a manner consistent with the reference method. Thus, for manual methods, "at least one 24-hour sample every six days" must be collected, with certain exceptions. 40 C.F.R. § 58.13(b). In addition, even after Appendix F becomes applicable, it states only that 24-hour averages presented in annual reports are to be based *either* on running averages for continuous methods *or* "*on individual measurement for intermittent methods.*" 44 Fed. Reg. 27598 (May 10, 1979) (emphasis added). In other words, the running average method is only an addition to the reporting requirements, and that addition is not even fully effective until 1981.

Conclusion

Compliance with the 24-hour SO_2 ambient standard must be determined in accordance with the calendar-day reference method (or equivalent method) specified in 40 C.F.R. Parts 50 and 53. Section 58.26 and Appendix F by their very wording contain only reporting requirements. To require compliance on other than a calendar-day basis, 40 C.F.R. Part 50 must be amended. No such change has even been proposed. We therefore request that EPA publish in the *Federal Register* the following clarifying statement:

> Parts 50 and 53, Title 40, of EPA's regulations require that compliance with the 24-hour SO_2 ambient standard be determined on a calendar-day basis. Section 58.26 and Appendix F to the final regulations contained in 44 Fed. Reg. 27558-27603 (May 10, 1979) are reporting requirements only, and do not influence in any way the manner in which compliance with the 24-hour SO_2 ambient air quality standards is determined.

In summary, Part 50 and Part 58 have been misconstrued by certain of your regions to require enforcement of the 24-hour SO_2 standard on a rolling average basis. This interpretation has no basis in law and is inconsistent with Agency intent as reflected in the plain meaning of the Part 50 and 58 regulations and the preambles to those rules. Enforcement of the ambient standard on a rolling average basis could create economic disruption through the creation of new nonattainment areas and would clearly adversely affect the Administration's program to encourage coal utilization. Therefore, to avoid these results, we urge that you make clear that the 24-hour SO_2 standard is to be enforced on a calendar-day basis. In light of the pending litigation in the D.C. Circuit on this matter, we would appreciate your response to this request within two weeks after receipt of this letter.

Sincerely yours,

/s/ Henry V. Nickel/FWB
HENRY V. NICKEL

cc: Earl Salo, Esq.
J. Jeffrey McNealey, Esq.

ATTACHMENT A

September 1979

UTILITY AIR REGULATORY GROUP

Membership List

Edison Electric Institute
National Rural Electric Cooperative Association
and
Alabama Power Company
Appalachian Power Company
Arizona Public Service Company
Baltimore Gas and Electric Company
Boston Edison Company
Carolina Power & Light Company
Central and South West Corporation
Central Power and Light Company
Public Service Company of Oklahoma
Southwestern Electric Power Company
West Texas Utilities Company
Central Hudson Gas & Electric Corporation
Central Illinois Light Company
Central Illinois Public Service Company
Central Maine Power Company
The Cincinnati Gas & Electric Company
Columbus and Southern Ohio Electric Company
Commonwealth Edison Company
Consolidated Edison Company of New York, Inc.
Consumers Power Company
The Dayton Power and Light Company
Delmarva Power & Light Company
The Detroit Edison Company
Duke Power Company
Florida Power Corporation
Florida Power & Light Company
Georgia Power Company
Gulf Power Company

Gulf States Utilities Company
Houston Lighting & Power Company
Illinois Power Company
Indiana & Michigan Electric Company
Indianapolis Power & Light Company
Iowa-Illinois Gas and Electric Company
Iowa Power and Light Company
Iowa Public Service Company
Kansas City Power & Light Company
Kentucky Power Company
Kentucky Utilities Company
Los Angeles Department of Water and Power
Madison Gas and Electric Company
Middle South Services, Inc.
Arkansas-Missouri Power Company
Arkansas Power & Light Company
Louisiana Power & Light Company
Mississippi Power & Light Company
New Orleans Public Service, Inc.
Minnesota Power & Light Company
Mississippi Power Company
Monongahela Power Company
Nevada Power Company
New England Power Company
New York State Electric & Gas Corporation
Niagara Mohawk Power Corporation
Northeast Utilities Service Company
The Connecticut Light and Power Company
The Hartford Electric Light Company
Holyoke Water Power Company
Western Massachusetts Electric Company
Northern Indiana Public Service Company
Northern States Power Company
Ohio Edison Company
Pennsylvania Power Company
Ohio Power Company
Ohio Valley Electric Corporation

Oklahoma Gas and Electric Company
Pacific Power & Light Company
Pennsylvania Power & Light Company
Portland General Electric Company
The Potomac Edison Company
Potomac Electric Power Company
Public Service Company of Indiana, Inc.
Public Service Electric and Gas Company
Rochester Gas and Electric Corporation
Salt River Project
San Diego Gas & Electric Company
Southern California Edison Company
Tampa Electric Company
Texas Utilities Generating Company
Tucson Electric Power Company
Union Electric Company
Utah Power & Light Company
Virginia Electric and Power Company
West Penn Power Company
Wisconsin Electric Power Company
Wisconsin Power and Light Company
Wisconsin Public Service Corporation

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 80-1441

EDISON ELECTRIC INSTITUTE, *et al.*,
Petitioners,

v.

DOUGLAS M. COSTLE, *et al.*,
Respondents.

EDISON ELECTRIC INSTITUTE'S SUGGESTION FOR REHEARING EN BANC

Statement of Issue Presented and Its Importance

On June 17, 1980, a panel of this Court, Judges Mikva, Edwards and McGowen,[1] dismissed without argument, and without opinion, a petition filed by Edison Electric Institute, *et al.* (Electric Utilities)[2] to review final actions of the Environmental Protection Agency (EPA or Agency).[3] The issue presented for rehearing is whether a petition to review under § 307(b)(1) of the Clean Air Act (the Act) can be based upon EPA's response to a

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[1] Judge McGowen did not participate in the decision.

[2] Petitioners Edison Electric Institute, *et al.* are comprised of 84 individual electric utilities, the Edison Electric Institute, and the National Rural Electric Cooperative Association.

[3] Since the panel did not issue an opinion in this case, and in view of the intimate relationship between the jurisdictional issues and the merits of this case, a copy of Electric Utilities' brief on the merits in the above-captioned case is set forth as an Attachment to this Suggestion for Rehearing. This brief was submitted to this Court on June 10, 1980, pursuant to Rule 31(a) of the Federal Rules of Appellate Procedure. *See* Brief of Petitioners Edison Electric Institute, *et al.* (June 10, 1980) (hereafter cited as "EEI Br. at ——.")

formal request for a definitive interpretation of the Administrator's regulations.

The panel's decision in this case, dismissing Electric Utilities' petition, signals a radical departure from the well established law of this Circuit encouraging, wherever possible, administrative resolution of issues before invoking the jurisdiction of this Court. The holding of the panel conflicts directly with the recent decision of the Supreme Court in *Harrison* v. *PPG Industries, Inc.*[4] and is inconsistent with the previous decisions of this Court in *Oljato Tribe* v. *Train*,[5] *Atlantic Richfield* v. *FTC*[6] and *Utah Power & Light* v. *EPA*.[7]

The meaning, scope and effect of every aspect of a new EPA regulation may not be clear at the time of its promulgation. Later interpretation is needed to resolve these ambiguities. On the other hand, a regulation may be seemingly clear at the time of promulgation and later given an interpretation which changes its apparent meaning. Under section 307(b) of the Clean Air Act, EPA's regulations and definitive interpretations of those regulations are reviewable if appealed to this Court within 60 days of their publication. Later judicial review of EPA's regulations is barred unless new grounds for review arise after the expiration of the 60-day period.

Given the restrictions on the timing of judicial review found in § 307(b), the panel's decision reflects a conclusion that Electric Utilities should have filed their petition to review at an earlier time. In this case, Electric Utilities sought, in good faith, the Administrator's definitive interpretation of certain of his regulations. In their request, Electric Utilities suggested an interpretation which

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[4] —— U.S. ——, 48 U.S.L.W. 4585 (May 27, 1980).

[5] 169 U.S. App. D.C. 195, 515 F.2d 654 (1975).

[6] 185 U.S. App. D.C. 229, 567 F.2d 96 (1977).

[7] 80 U.S. App. D.C. 70, 553 F.2d 215 (1977).

was consistent with the plain meaning of these regulations and well established rules of construction. When this interpretation was rejected by EPA, Electric Utilities filed a petition to review within 60 days. In view of the fact that EPA's regulations did not give adequate prior notice of the interpretation under review, dismissal of Electric Utilities petition raises questions of fundamental fairness that deserve the consideration of the Court en banc.

In a broader sense, the panel's decision, if allowed to stand, would increase this Court's case load and expand the issues raised in judicial review proceedings brought under statutes such as the Clean Air Act. Before this decision, petitioners such as Electric Utilities would decide whether to challenge a rule (and, if so, which issues to brief) on the basis of a fair and reasonable construction of the regulations in question. If ambiguity existed, petitioners would seek administrative clarification before invoking the jurisdiction of this Court. Dismissal of this case is fundamentally incompatible with this approach to litigation.

Under the panel's decision, a new interpretation of a rule issued more than 60 days after its promulgation cannot be appealed *no matter how unreasonable.* To avoid foreclosure of judicial review, therefore, those potentially affected by a rule will be forced to litigate based upon "worst case" assumptions as to how the rule might be interpreted. As a result, "protective" petitions will proliferate, as will the number of issues briefed in any appeal. Given the breadth and scope of the issues raised in major EPA rulemakings and the burdens imposed on this Court and those adversely affected by such rules in the management of such appeals,[8] such a proliferation of potentially speculative and unwieldy litigation is high-

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[8] *See, e.g., Alabama Power Co. v. Costle,* —— U.S. App. D.C. —— (No. 78-1006, Dec. 14, 1979).

ly undesirable. In view of these potential consequences of the panel's decision, rehearing en banc is necessary.

II. *Statement of the Case*

In 1971, EPA promulgated national ambient air quality standards for sulfur dioxide (SO_2). Those standards are codified at 40 C.F.R. Part 50 and provide that compliance with the 24-hour SO_2 standard is to be determined using calendar day (midnight-to-midnight) averages.[9]

In May of 1979, regulations for reporting ambient air quality monitoring data under § 110 of the Act were promulgated by EPA. Those regulations are codified at 40 C.F.R. Part 58. A footnote in an appendix to the Part 58 regulations requires that 24-hour SO_2 concentrations be *reported* using "running averages" whenever there is continuous monitoring data.[10] Since Electric Utilities did not have an objection to the reporting of SO_2 data in this manner, they did not file a petition to review the Part 58 regulations.[11]

Electric Utilities learned in the fall of 1979 that a petition to review the Part 58 regulations had been filed and was being pursued by PPG Industries.[12] Electric

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[9] Under the 24-hour SO_2 standard, a violation occurs upon finding a second exceedance of the specified ambient concentration in a given year. With the calendar day compliance method, a maximum of 365 compliance periods a year is exmained in determining whether the standard has been met. *See* EEI Br. at 10-16.

[10] Using the running averages technique, there are a maximum of 8,737 24-hour periods in a year.

[11] There is no inconsistency between reporting data using running averages and determining compliance using "calendar day averages." *See* EEI Br. at 14 n.18, 17 n.22.

[12] PPG's petition was initially filed as a "protective" matter because it appeared that EPA Region V may have used running averages in determining that the 24-hour standard had been vio-

Utilities were told by PPG counsel that subordinates of the Administrator had expressed the opinion that the Part 58 regulations changed the method for evaluating compliance with the SO_2 standards from calendar day averages to running averages.[13] In Electric Utilities' view, this interpretation was not supported by the language of Part 58, conflicted with Parts 50 and 53 of EPA's regulations, and was inconsistent with § 109 of the Act.[14] Electric Utilities therefore petitioned the Administrator for an official definitive interpretation of the Part 58 regulations as well as those portions of his Part 50 and Part 53 regulations which establish methods for determining compliance with the 24-hour SO_2 standard.[15]

Electric Utilities asked the Administrator to act promptly on the request citing the briefing schedule in

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lated in Summit County, Ohio. After filing their petition, PPG counsel met with EPA counsel to discuss the petition. At that meeting, EPA counsel stated that, in his view, Part 58 was intended to impose running averages as the method for determining compliance with the SO_2 24-hour standard. While PPG filed its initial brief based upon this interpretation of EPA counsel, it was not until EPA's brief was filed that counsel for PPG knew for certain that the Agency would adhere to this position. *See* EEI's Opposition to Motion to Dismiss (May 19, 1980), p.5 n.5 (hereafter "EEI Opposition").

[13] Such a shift in compliance methods would significantly increase the stringency standard of the 24-hour standard. EPA admits that, by increasing the number of compliance periods from 365 to 8,737, up to a *30-40* percent increase in the stringency of the SO_2 standard will result. *See* EEI Br. at 19, 28.

[14] *See* EEI Br. at 32-45.

[15] Part 50 contains the basic "reference method" for determination of compliance with the SO_2 ambient standard—the calendar day method. *See* EEI Br. at 10-15. Part 53 contains rules for demonstrating that new measurement techniques produce results *equivalent* to the reference method. In showing the equivalency of measurement techniques, Part 53 directs that only one measurement "per day" be made. *See* EEI Br. at 16-18.

the pending *PPG* case. EPA counsel indicated to counsel for Electric Utilities, however, that the request for interpretation raised substantial questions that could not be responded to before the deadline for petitioners' brief in the *PPG* case. Accordingly, Electric Utilities filed an amici brief in the pending *PPG* case informing the Court of the pending request for interpretation which, if acted upon favorably, could render moot the PPG petition.

In March of 1980, EPA's Office of General Counsel, acting under authority of the Administrator, responded to EEI's request. The Agency rejected Electric Utilities' interpretation of Parts 50, 53 and 58 and cited the respondents' brief in the *PPG* case as setting forth the Agency's official interpretation of these rules. On April 25, Electric Utilities' petitioned this Court to review EPA's Parts 50 and 58 regulations as construed by the Agency on March 18.

On May 9, 1980, EPA filed a motion to dismiss EEI's petition to review. In its motion to dismiss, EPA contends that this Court has no jurisdiction over Electric Utilities' petition under § 307(b)(1). The basis for the motion was: (1) that EEI was seeking review of a brief and a brief is not reviewable final Agency action (*see* note 20 *infra*), and (2) that Electric Utilities' petition to review the Part 50 and 58 rulemakings was untimely, since the Part 58 rules were "clear on their face" that the 24-hour standard was to be enforced using running averages.[16]

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[16] The asserted clarity of the Part 58 regulations in establishing a running average compliance determination requirement is contradicted by the language of those regulations. See EEI Br. at 36-39. It is also belied by EPA's actions and words. Counsel for EPA told Electric Utilities that the request for interpretation presented questions of such substantiality that immediate response was not possible. After taking four months to respond, rather than pointing to any portion of Parts 50, 53, or 58 which manifests their clarity, EPA referred to a 50-page brief to explain the Agency's "views" on those regulations.

On May 19, 1980, Electric Utilities filed an extensive opposition explaining that the petition challenged an official interpretation of EPA's rules, review of which could not be avoided by EPA's choosing to set forth that interpretation in a brief. The opposition also strongly disagreed with EPA's assertion that the language of Part 58 clearly supports EPA's interpretation of its regulations. Finally, Electric Utilities noted the interrelationship between EPA's jurisdictional attack and the merits of this case, and suggested postponing action on EPA's motion pending briefing on the merits. EPA replied, repeating their initial arguments.

On June 10, 1980, Electric Utilities filed its brief on the merits in accordance with Rule 31(a) of the Federal Rules of Appellate Procedure. On June 17, 1980, the panel granted EPA's motion without opinion. In acting on the motion, the Court did not consider Electric Utilities' brief on the merits.

Argument

The first clue Electric Utilities had that the Part 58 regulations might have been more than section 110 reporting requirements came after the expiration of the 60-day period for judicial review and arose out of reported informal statements of subordinates of the Administrator of EPA. This interpretation of subordinates conflicted, in Electric Utilities' view, with the plain meaning of EPA's Parts 50, 53 and 58 regulations. See EEI Br. at 33-42, 44-46. In this setting, EEI was justified, if not required by decisions of this Court, to request an official and definitive Agency interpretation of Parts 58, 50, and 53 before seeking review in this Court.

FTC v. *Atlantic Richfield*, this Court held that an interpretation of a regulation proferred by both industry counsel and agency counsel in litigation could not be accepted by the Court because of "[t]he salutory and

settled rule of administrative law that the Agency, and not the reviewing court, *is to be accorded the first opportunity to construe its own regulations.*" [17] Accordingly, this Court remanded the rule to the Commission for "a clear and definitive interpretation . . . ." *Id.* In view of this holding, it was incumbent upon Electric Utilities to give the Administrator the opportunity to construe his Parts 50, 53 and 58 regulations before asking this Court for review.[18]

Similarly, in *Oljato Chapter of Navajo Tribe* v. *Train*, this Court stated that before petitioning to review a previously promulgated rule on the basis of post 60-day developments, the Administrator of EPA should be given the opportunity to resolve the matter.[19] *Oljato* therefore required Electric Utilities to present to the Administrator the reported interpretation of his subordinates and to request that he reject that interpretation. Only after Electric Utilities' request was denied by the Administrator, giving rise to a definitive Agency position on these rules, could Electric Utilities ask this Court to pass on the validity of the Parts 50 and 58 regulations and the Agency's construction of them.

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[17] 185 U.S. App. D.C. at 236, 567 F.2d at 103.

[18] The Administrator of EPA has not delegated to the EPA regions or the General Counsel's Office the final responsibility to construe definitively EPA's Clean Air Act regulations or to resolve conflicts among them. Indeed, the Clean Air Act would seem to prohibit such a general delegation of responsibility since rulemaking authority is vested *exclusively* in the Administrator and that authority cannot be delegated. Clean Air Act § 301(a)(1). Under the Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.* (1976) (hereafter "APA"), a rule is defined to include "an agency statement of general or particular applicability . . . designed to . . . interpret . . . law or policy . . . ." 5 U.S.C. § 551(4) (1976). In the context of the Clean Air Act, theerfore, it is appropriate to seek a definitive construction of EPA's regulations from the Administrator when faced with an informal interpretation of his subordinates.

[19] 169 U.S. App. D.C. at 206-07, 515 F.2d at 665-66.

Electric Utilities thus followed clearly established precedents of this Court in seeking and securing a definitive interpretation from the EPA Administrator before petitioning to review the Part 50 and 58 regulations. The panel's order denies Electric Utilities the right to obtain judicial review of this definitive Agency interpretation and the previously promulgated regulations affected by it.[20] As discussed below the panel's decision to dismiss this case is contrary to the decisions of the Supreme Court and this Court.

1. The Order of Dismissal Conflicts With the Recent Decision of the Supreme Court in *Harrison* v. *PPG Industries, Inc.*

In this case, Electric Utilities' petition sought review of an official interpretation of EPA's regulations—an interpretation of Parts 50, 53, and 58 of those regulations which was issued under the authority of the Administrator and in response to a formal request for such an interpretation filed by Electric Utilities. Dismissal of such a petition conflicts directly with the recent decision of the Supreme Court in *Harrison* v. *PPG Industries, Inc.*, —— U.S. ——, 48 U.S.L.W. 4585, (May 27, 1980). In that case, decided eight days after Electric Utilities filed their Opposition to the Motion to Dismiss, the Court held that the response of a Regional EPA Administrator to a request for interpretation is "final agency action," and constitutes an adequate jurisdictional basis for a petition to review under § 307(b)(1) of the Act. *Id.* at 4587. In the *Harrison* case, the Agency response to the

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[20] EPA's assertion that Electric Utilities are appealing a brief is, of course, a self-serving "red herring" of the Agency's own creation. The Agency's March 18 interpretation of Parts 50, 53 and 58 is no less official, and no less reviewable, because EPA chose to reference a brief rather than preparing a separate reasoned response to Electric Utilities' request.

petitioners' request for interpretation was found to be sufficient to vest jurisdiction *even though* the response merely *reaffirmed* a *previous* EPA determination. *Id.* at 4586. In the instant case, the response to the EEI request for interpretation represented the *first* official pronouncement by the Agency on the matter.

2. The Order of Dismissal is Inconsistent with the Decision of this Court in *Utah Power & Light* v. *EPA*.

Electric Utilities' petition also sought review of the 24-hour SO_2 standard in Part 50 and the Part 58 regulations, citing the March 18 interpretation as new grounds for review of that standard. In the context of this case, dismissal of such a challenge is inconsistent with Judge Leventhal's opinion in *Utah Power & Light* v. *EPA*, 180 U.S. App. D.C. 70, 553 F.2d 215 (1977).

In that case, this Court dismissed a petition to review an interpretation of a regulation on the ground that an interpretation of a rule was not included within the class of actions independently reviewable under the 1970 Act's version of § 307(b)(1).[21] In reaching this result, Judge Leventhal indicated that an interpretation of a regulation could, however, provide post 60-day grounds for review of the underlying regulation where it is "contended" that the "interpretation at hand is a 'new' circumstance that, if accepted as a correct interpretation of the regulation, has the effect of rendering the regulation invalid." *Id.* at 74 n.20, 553 F.2d at 219 n.17. Here, Electric Utilities made such a contention and, in its brief on the merits (which the panel did not consider), Electric Utilities explain in detail why, if EPA's construction of Part

[21] Jurisdiction under § 307(b)(1) was vastly expanded in 1977 to include all "final actions" of the Agency, including official Agency interpretations. *See* Harrison v. PPG Industries, Inc. —— U.S. ——, 48 U.S.L.W. 4858 (1980).

58 is accepted, the 24-hour SO_2 standard in Part 50 is rendered invalid on substantive and procedural grounds (*see* EEI Br. at 44-58) and the Part 58 regulations is invalid on procedural grounds.[22] *See* EEI Brief at 59-62.

3. The Order of Dismissal is Inconsistent with Cases in this and Other Circuits that Caution Against Resolving the Merits Before They are Heard by the Court.

For the panel to grant EPA's motion to dismiss, it was necessary to resolve in EPA's favor issues which are at the heart of the merits of this case—whether the Part 58 regulation "is clear on its face" in establishing a new means of determining compliance with the SO_2 ambient standard (*see* EEI Br. at 36-42), whether the Part 50 regulations permit anything other than a calendar-day compliance method (*see* EEI Br. at 33-35, 46-55), and whether the Part 53 regulations authorize running averages enforcement. *See* EEI Br. at 16-18, 34-35. Electric Utilities disagree with EPA's position on each of these issues, and the panel did not consider Electric Utilities' brief on the merits in dismissing this case. The law of this and other circuits establish that it was improper for the panel to accept EPA's position on these issues.

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[22] In addition, this Court has found that when notice in a rulemaking is ambiguous on a particular issue, the promulgation of final rules is *not* a "final action" as to that issue. Under this theory, the "final action" occurs only when the ambiguity is cured. *See generally*, Environmental Defense Fund v. Costle, 448 F. Supp. 89, 93 n.11 (D.D.C. 1978). In this case, the Part 58 rulemaking is at best amgiguous on the issue of the appropirate compliance method. This ambiguity was officially resolved in the March 18 EPA letter, making these Part 58 rules as they pertain to ambient standard compliance determination final Agency action *at that time*. Electric Utilities' petition, filed within 60 days of this definitive interpretation, is on these grounds as well as timely appeal of final Agency action.

It is well recognized that, in passing on a motion to dismiss, courts should not act precipitously to resolve the merits. For example, in reviewing actions appealed from the District Court, this Court has stated that the reviewing court should explore any promising avenue to the District Court's jurisdiction.[23] In ruling on petitions to review dismissal of actions in lower courts, therefore, it is common practice to construe allegations in favor of the party facing dismissal.[24] Similarly, in cases where standing is raised as grounds for dismissal, the motion to dismiss is decided on the allegations of the complaint and not on full-blown consideration of the merits.[25] Finally, in *Utah Power & Light*, Judge Leventhal indicated that a *contention* that an agency's interpretation was "new grounds" for review alone would be sufficient for § 307(b) jurisdiction.[26] The panel therefore should not have granted EPA's motion to dismiss without considering Electric Utilities' brief on the merits.

Conclusion

Rehearing this case en banc is necessary first, to rectify the unfairness inherent in denying judicial review in a case where petitioners sought in good faith to obtain the Agency's official interpretation of its regulations and then filed a timely petition to review that inter-

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[23] *Ass'n of American Medical Colleges*, v. *Califano*, 186 U.S. App. D.C. 270, 569 F.2d 101 (1977).

[24] *See* Scheuer v. Rhodes, 416 U.S. 232, 236 (1974); Mann v. Adams Realty Co., Inc., 556 F.2d 288, 293 (5th Cir. 1977).

[25] *See U.S.* v. *SCRAP*, 412 U.S. 669, 683-85 (1973); Harrington v. Bush, 180 U.S. App. D.C. 45, 63, 553 F.2d 1208, 190 (1977).

[26] 180 U.S. App. D.C. at 74 n.20, 553 F.2d at 219 n.17. *Cf.* Cooper v. Isaacs, 145 U.S. App. D.C. 279, 283, 448 F.2d 1202, 1206 (1971), where this Court recognized that if plaintiff alleged facts which would entitle him to relief, this Court would not assume that the complaint filed below was groundless.

pretation, and second, to avoid proliferation of speculative and unwieldy litigation. As the exclusive forum for review of numerous major actions of the Administrator of EPA under the Clean Air Act, the panel's decision in this case will affect the course of a substantial percentage of future Clean Air Act litigation. Recent major cases under the Clean Air Act, such as the *Alabama Power* case, would have involved more parties and more issues had all those potentially affected by the rules hypothesized "worst case" interpretations instead of seeking administrative interpretations where doubt existed as to the meaning of the rule.[27] In signalling that this practice should end, the panel's decision will make the management of such cases significantly more difficult.

For these reasons and those discussed above, rehearing en banc is appropriate.

Respectfully submitted,

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[27] Note 8 *supra*. Electric Utilities were the petitioners in *Alabama Power* and counsel in this case was also lead counsel for all Industry Petitioners in *Alabama Power*.

GUIDELINE SERIES

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GUIDELINES FOR THE INTERPRETATION OF AIR QUALITY STANDARDS

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina

GUIDELINES FOR THE INTERPRETATION OF AIR QUALITY STANDARDS

February 1977

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Monitoring and Data Analysis Division
Research Triangle Park, North Carolina 27711

INTRODUCTION

This revised guideline document discusses a series of issues concerning the interpretation of air quality data with respect to the National Ambient Air Quality Standards (NAAQS). This revision supercedes the original August 1974 version of this document. The issues presented deal with points of interpretation that have frequently resulted in requests for further clarification. Each issue is presented with a recommendation and a discussion indicating our current position. It is hoped that this document will continue to be useful in the evolutionary development of a uniform and consistent set of criteria for relating ambient air quality data to the NAAQS.

ISSUE 7A: The NAAQS for CO and SO_2 include an eight-hour CO standard and three- and twenty-four-hour SO_2 standards. For such standards, how is the time interval defined?

Recommendation

Compliance with these standards should be judged on the basis of running averages starting at each clock-hour. However, in determining violations of the standard the problem of overlap must be considered. This point can best be illustrated by consideration of the 8-hour CO average. In order to exceed the 8-hour CO standard twice, there must be two 8-hour averages above the standard and the time periods for these averages must not contain any common hourly data points. A simple counting procedure for this interpretation for 8-hour CO is to proceed sequentially through the data and each time a violation is recorded, the next seven clock hours are ignored and then the counting is resumed. In this way there is no problem with overlap. It should be noted that a clock-hour is the smallest time interval suggested for reporting data.

Discussion

This issue has generated considerable interest concerning the relative merits of fixed versus running averages. At the present time the computational advantages of the fixed interval approach are outweighed by the following properties of running averages: (1) running averages afford more protection than fixed averages and this additional margin appears warranted, (2) running averages more accurately reflect the dosage to receptors, and (3) running averages provide more equitable control from one region to another due to differences in diurnal patterns.

Recommending a running 24-average interpretation for SO_2 represents a change and, therefore, certain points

should be mentioned. There has been a considerable increase in the use of continuous SO_2 monitors and the promulgation of the equivalency regulations has provided the mechanism to establish that continuous methods are equivalent to the Federal Reference Method (24-hour bubbler). In some cases, particularly around large isolated point sources, the fixed midnight-to-midnight interpretation can result in second high values 30 to 40 percent lower than the second highest non-overlapping 24-hour average. As a consequence, a site that appears to be in compliance using midnight-to-midnight values may actually have other 24-hour averages well above the standard. Therefore, to ensure adequate protection, the running 24-hour average interpretation is recommended. However, it is recognized that in many areas of the country SO_2 levels are sufficiently low and well behaved that the midnight-to-midnight computations are adequate to show compliance. Therefore, it is only necessary to compute running 24-hour averages for borderline situations. Because 24-hour bubblers are seldom the only monitors in areas where this problem arises (due to the 3-hour standard), such data continue to be generally adequate for demonstrating compliance.

The counting procedures for 3-hour or 24-hour standards are similar to that described for 8-hour CO with the obvious change of ignoring the next two 3-hour averages or the next twetny-three 24-hour averages, respectively, when counting values above the corresponding standard.

It is worth noting that in applying this counting procedure, the maximum and second highest values could be ignored because they are overlapped by a counted value. Therefore, the sole function of this procedure is to count the number of non-overlapping violations. The identification of the maximum and second highest values is an independent procedure as described in the following discussion of Issue 7B.